



# Career Forward Task Force

Report | Tennessee Department of Education | December 2016



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# Executive Summary

Tennessee Commissioner of Education Candice McQueen announced the formation of the Career Forward Task Force on March 22, 2016. The task force's charge was to (1) examine and explore ways to better engage students in their academic preparations, personal and social development, and workforce readiness; and (2) identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education. The ultimate goal of the group was to craft the picture of a successful K-12 graduate in the state of Tennessee and develop recommendations to support that vision.

To support the charge, the task force oriented its work around the following guiding questions:

1. How do we know when a student is "career ready" at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state's economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

The 36-member task force represented members from K-12, higher education, industry, nonprofit, state-level agencies, local and state elected officials, state-level advocacy groups, parents, and most importantly students. The task force met six times over late spring and summer 2016.

Over the course of the meetings, task force members received numerous briefings and readings on postsecondary and career readiness in Tennessee and nationwide. Through the learnings that came from these touch points, the task force achieved three notable accomplishments tied to its charge. First, members established a definition of postsecondary and career readiness for the state of Tennessee. The intent of the definition was set forth by the governor's workforce sub-cabinet, which sought a cross-institutional, cross-sector definition that reflected the priorities of Tennessee. Second, members created guiding principles to serve as an affirming framework for their third priority, which was the crafting of recommendations designed to complement and reinforce existing state, regional, and local efforts, while calling out new, bold actions that will ensure Tennessee is producing a more postsecondary and career ready citizenry.

As defined by the career forward task force, a career-ready student is:

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*In Tennessee, career-ready students are those who graduate K-12 education with the knowledge, abilities, and habits to enter and complete postsecondary education without remediation and to seamlessly move into a career that affords them the opportunity to live, work, and sustain a living wage.*

*To achieve these outcomes, students should have a clear understanding of their learning pathways from as early as middle school and possess academic and technical knowledge that can be exhibited successfully and consistently across settings and experiences. They must also possess employability skills exhibited through critical thinking, written and oral communications, collaboration, problem solving, work ethic, and persistence. With such knowledge and skills, students can pursue their career opportunities with confidence and be engaged citizens, positively contributing to their communities.*

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Inspired by the definition and subsequent guiding principles, the task force has put forth 23 recommendations falling into three areas of (1) postsecondary and career readiness, (2) student supports, and (3) data and accountability. Additionally, it identified several areas of interest for further analysis.

Complementary to the work of the task force is the department of education's strategic plan, *Tennessee Succeeds*, which has focused two of its four goals on the achievement of a postsecondary-career ready graduate.<sup>1</sup> These goals are: (1) Tennessee will have an average public ACT composite score of 21 by 2020 and (2) the class of 2020 will be on track to achieve 55 percent postsecondary completion in six years.

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<sup>1</sup> <https://www.tn.gov/education/topic/strategic-plan>

# Career Forward Task Force

## ***Overview***

In the spring of 2016, Commissioner McQueen announced the formation of the Career Forward Task Force. The task force's charge was to (1) examine and explore ways to better engage students in their academic preparations, personal and social development, and workforce readiness; and (2) identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary, and workforce readiness into K-14/16 education. The ultimate goal of the group was to craft the picture of a successful K-12 graduate in the state of Tennessee and develop recommendations to support that vision.

To support the charge, the task force oriented its work around the following guiding questions:

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3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

During late spring and summer 2016, the task force met six times to learn about the current state of Tennessee's postsecondary and career readiness, existing work occurring in Tennessee to support readiness, how other states are supporting readiness, and updates on federal legislation. Task force meetings included presentations from state, local, and national experts and allowed for ample time for discussion and reflection.

Presentations, materials, and pre-readings from the task force meetings are included in the accompanying appendix.

## ***Career Forward Task Force Members***

Task force members represented stakeholders from various groups who play a role in cultivating postsecondary and career ready students. This included representatives from K-12, higher education, industry, nonprofit, state-level agencies, local and state elected officials, state-level advocacy groups, parents, and most importantly students. On the following page is a complete list of members.

<b>Member</b>	<b>Title</b>
Arlette Robinson	Bradley County Schools, CTE Director
Audrey Shores	Professional Educators of Tennessee, Chief Operations Officer
Becca Leech	Warren County Schools, Teacher
Burns Phillips	Tennessee Department of Labor & Workforce Development, Commissioner
Cal Wray	Clarksville-Montgomery County EDC, Executive Director
Dr. Candice McQueen	Tennessee Department of Education, Commissioner
Catherine English	Vanderbilt University/Metro-Nashville Public Schools, Student
Dr. Celeste Carruthers	University of TN-CBER, Assistant Professor
Dr. Danielle Mezera	Tennessee Department of Education, Assistant Commissioner
Debbie Landers	Tennessee Assoc. of Non-Public Academic Schools, Executive Director
Debbie Shedden	Tennessee School Boards Association, Hawkins County School Board Member
Dolores Gresham	Chairman, Senate Education Committee, Tennessee General Assembly
Eddie Pruett	Gibson County Special Schools, Director of Schools
Harry Brooks	Chairman, House Education Committee, Tennessee General Assembly
Jade Grieve	America Achieves, Senior Director
James King	Tennessee Board of Regents, Vice Chancellor
Jeff Frazier	Eastman Chemical/RCAM, Director
Jerry Boyd	Putnam County Schools, Director of Schools
John Faulconer	Knox County Schools, Principal (at time of task force)
John Forgety	General Assembly, Representative
Dr. Kathleen Airhart	Tennessee Department of Education, Deputy Commissioner
Dr. Kristen McGraner	STEM Prep Academy, Principal
Kristina McClure	K-12 Parent
Kyle Southern	SCORE, Director of Policy and Research
Laura Moore	Metro-Nashville Mayor's Office
Mark Norris	Senate Majority Leader, Tennessee General Assembly
Mike Krause	Tennessee Promise & Drive to 55, Executive Director (at time of task force)
Missy Blissard	Rutherford County Schools, School Counselor
Russ Deaton	Tennessee Higher Education Commission, Interim Executive Director (at time of task force)
Dr. Sara Heyburn	Tennessee State Board of Education, Executive Director
Stacey Kizer	Williamson County Schools, Teacher
Susan Farris	Lauderdale County Schools, CTE Director
Ted Townsend	Tennessee Department of Economic & Community Development, Chief Operating Officer
Tony Cates	Gestamp, Human Resources Manager
Dr. Tristan Denley	Tennessee Board of Regents, Vice Chancellor
Dr. Vicki Kirk	Tennessee Department of Education, Deputy Commissioner

## ***Structure of the Task Force***

The career forward task force met monthly in Nashville, from March to August 2016. Each meeting included presentations from internal and external stakeholders to provide the task force with context and information on current state, national, and federal initiatives supporting postsecondary and career ready students. Task force members engaged in whole group and small group discussions around the content of the presentations, in order to shape and establish guiding principles, recommendations, and a definition of postsecondary and career readiness. The general topics discussed at each meeting are listed below.

### **Schedule and Content of Task Force Meetings**

#### **March 24, 2016**

- Overview and charge
- Tennessee landscape and broader challenges
- Preparedness versus readiness
- P-Tech schools
- Massachusetts process for defining college and career readiness

#### **April 22, 2016**

- Overview of Federal Acts: WIOA, ESSA, Carl Perkins
- Tennessee Workforce Development by Department of Economic and Community Development and Department of Labor
- Employer Panel
- Secondary and Postsecondary in CTE

#### **May 25, 2016**

- Tracking Student Trajectories Over Time
- Tennessee Assessments
- Tennessee's Student Readiness Initiatives
- ACT WorkKeys
- Student Panel

#### **June 30, 2016**

- Profile of Practice: Rutherford County Chamber of Commerce, Bradley County Schools, Upper Cumberland Region
- Discussion of draft principles, definition, and recommendations

#### **July 27, 2016**

- *TNSucceeds* Vision and ESSA Opportunities
- College and Career Readiness Data Strategy
- Discussion of draft principles, definition, and recommendations

#### **August 24, 2016**

- Final discussion of guiding principles, definition, and recommendations

The agendas, presentations, pre-readings, and meeting summaries can be found in the appendix.

# Terms

The terms below are terms frequently referenced throughout the report and are included to ensure a uniform understanding of the background information, definition, guiding principles, and recommendations.

**Career:** A career is a long-standing occupation aligned with a person's interests.

**Career Experience:** Career experience is gaining hands-on access to the day-to-day work of the career through, for example, an internship.

**Career Exposure:** Career exposure is awareness and knowledge about different careers.

**Co-Requisite Remediation:** Remediation occurs when students are not equipped with the knowledge and skills necessary to be successful at postsecondary coursework. Students enrolled in co-requisite remediation take an additional course in conjunction with a credit-bearing course. Traditional remediation requires students to take a non-credit-bearing course prior to enrolling in the credit bearing course.

**Counseling:** School counseling is the support of student's academic, socio-emotional, and career awareness development.

**Early Postsecondary Opportunities (EPSOs):** Early Postsecondary Opportunities are opportunities for students to take postsecondary level coursework or exams while in high school with the potential to earn postsecondary credit. Currently in the state of Tennessee there are eight EPSO options: advanced placement, Cambridge international exams, college level exam program, dual enrollment, international baccalaureate, local dual credit, statewide dual credit, and industry certifications.

**Employability/Soft Skills:** Employability skills/soft skills are the interpersonal skills necessary for success in the work force.

**Integrated Academic-Technical Pathway:** A learning pathway inclusive of general education knowledge and career and technical education pathways.

**Learning Pathways:** The set of academic courses, certifications, credentials, degrees, or diplomas necessary for a student to seamlessly transition into their career.

Integrated Learning Pathways: the pathway combining academic and technical knowledge.

**Living Wage:** A wage that ensures a person can support themselves, and their families, without the need of government assistance.

**Pathways Tennessee:** Pathways Tennessee is part of a multi-state consortium, the Pathways to Prosperity Network, which aims to address the "skills gap" of students being unprepared to enter the workforce.



**Postsecondary:** Postsecondary refers to any certification, certificate, degree, or diploma obtained after graduating high school.

**Seamless Transition:** A seamless transition can occur at any point in a student's trajectory to career such as between high school and postsecondary, and postsecondary and a career. A seamless transition includes a limited break between the two events.

**Work-Based Learning:** Work-based learning is the opportunity to gain high school credit and work exposure/experience by participating in internships, apprenticeships, and paid work experience.

## Postsecondary and Career Readiness

### *National Landscape*

Nationwide, states are struggling to prepare students for postsecondary and career. Roughly half of all Americans reach their mid-twenties without the skills or credentials essential for success in today's economy according to the 2011 Harvard Graduate School of Education Report, *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21<sup>st</sup> Century*.<sup>2</sup> Not only is there a skills gap, there is a mismatch in what is deemed "ready" for postsecondary and career across different stakeholders in society. For example, a Gallup-Lumina poll published in the report *What America Needs to Know about Higher Education Redesign* revealed that 96 percent of postsecondary chief academic officers are extremely or somewhat confident in their institution's ability to prepare students for the workforce, whereas only 11 percent of business leaders strongly agree today's graduates have the skills and competencies that their businesses need.<sup>3</sup> These statistics reveal that not only is it necessary to provide students with the knowledge and skills to be successful in postsecondary and career but that we need a larger breadth of stakeholders to be involved in the discussions in order to find common ground on what defines "knowledge and skills."

To that end, the EdTrust report *Meandering Toward Graduation: Transcript Outcomes of High School Graduates* found that nationwide only eight percent students were graduating high school with a "college and career ready" curriculum, 31 percent were graduating with only a "college ready" curriculum, 13 percent with a "career ready" curriculum, and 47 percent were graduating with no cohesive curriculum.<sup>4</sup> The report underscores the critically low numbers of students leaving our

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<sup>2</sup> [https://dash.harvard.edu/bitstream/handle/1/4740480/Pathways\\_to\\_Prosperty\\_Feb2011-1.pdf?sequence=1](https://dash.harvard.edu/bitstream/handle/1/4740480/Pathways_to_Prosperty_Feb2011-1.pdf?sequence=1)

<sup>3</sup> <https://www.luminafoundation.org/files/resources/2013-gallup-lumina-foundation-report.pdf>

<sup>4</sup> [https://edtrust.org/wp-content/uploads/2014/09/MeanderingTowardGraduation\\_EdTrust\\_April2016.pdf](https://edtrust.org/wp-content/uploads/2014/09/MeanderingTowardGraduation_EdTrust_April2016.pdf)

educational systems underprepared at graduation and calls clear attention to the even lower rates for students who are minorities and/or from low-income families/backgrounds.

It is this lack of “readiness” and mismatch in understanding that it has led many states to develop a definition of college and career readiness. According to the *Overview: State Definitions of College and Career Readiness* report published by the American Institutes for Research, 36 states and the District of Columbia have a definition of college and career readiness as of 2014.<sup>5</sup> The definitions include information in the categories of academic knowledge, critical thinking/and or problem solving, social emotional learning, collaboration and/or communication, grit/resilience/perseverance, and citizenship and/or community involvement. Though it is important to point out that not all definitions are being utilized regularly by their respective states to inform decision-making on policies and approaches in education.

For its contribution to the discussion, the Federal Government has been supporting the development of initiatives related to more cohesive implementation of postsecondary and career readiness strategies through the passing of the Workforce Innovation Opportunity Act (WIOA) in 2014 and Every Student Succeeds Act (ESSA) in 2015. Federal policy is shifting to the stance that postsecondary education is a necessity and not a luxury, when it comes to being “career ready” and stressing the importance of using funds wisely across different sources to maximize potential benefits at the state and local levels.

### ***Tennessee’s Landscape***

Tennessee began its trajectory in defining and supporting postsecondary and career readiness in 2007 when the U.S. Chamber of Commerce rated Tennessee an F in the categories of *Truth in Advertising* and *Postsecondary and Workforce Readiness*.<sup>6</sup> According to the report, Tennessee state assessments were showing that 80 percent of students were proficient or advanced, whereas national assessments were showing that the number was closer to 25 percent. Additionally with a 2007 graduation rate of 81.4 percent, lagging behind the national average, Tennessee knew that changes needed to be made as students were not being prepared for postsecondary or workforce success.<sup>7</sup> For a representative overview of Tennessee’s initiatives to rectify these challenges, refer to the following timeline below.

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<sup>5</sup> [http://www.ccrscenter.org/sites/default/files/CCRS%20Definitions%20Brief\\_REV\\_1.pdf](http://www.ccrscenter.org/sites/default/files/CCRS%20Definitions%20Brief_REV_1.pdf)

<sup>6</sup> <https://www.uschamber.com/report/report-card-2007-overview-and-map>

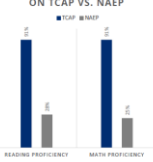
<sup>7</sup> <https://www.tn.gov/education/topic/report-card>

## CALL TO ACTION.

In the spring of 2007, the U.S. Chamber of Commerce released an education report card for all states.

- Tennessee received an "F" in the category of *Truth in Advertising* when comparing proficiency on Tennessee assessments to National Assessment of Education Progress (NAEP).
- Tennessee also received an "F" in the category of *Postsecondary and Workforce Readiness*.

GRADE 3-8 ACHIEVEMENT ON TCAP VS. NAEP



## RESPONSE: RAISE STANDARDS.

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2007	2008	2009	2010	2013	2014	2015	2016
Tennessee receives "F" rating for truth in advertising of state standards from U.S. Chamber of Commerce.	Tennessee adopts higher standards through the Tennessee Diploma Project.	Governor Bredesen and Education Commissioner Tim Webb join the Common Core State Standards Initiative.	Tennessee wins the Race to the Top grant of \$501 million.  Tennessee State Board of Education unanimously adopts the Common Core State Standards in English language arts and math.	Tennessee adopted new social studies standards in July.  First phase of CTE course revisions completed.	New social studies standards implemented in 2014-15.  Math and ELA standards review process begins with a public website.	New science standards review process begins with a public website for implementation in 2018-2019.	Review website for social studies standards will be launched in January.  New math and ELA standards will be presented to State Board of Education for implementation in 2017-18.

## RESPONSE: INCREASE ACCOUNTABILITY. RESPONSE: ALIGN ASSESSMENTS.

2011-12	2012-13	2013-14	2014-15	2015-16	2011-12	2013-14	2014-15	2015-16
Earned approval for first ESA flexibility waiver to develop our own state accountability system.  Led the nation in implementing TEAM, our statewide teacher evaluation model.	Additional support for evaluation provided through regional coaches and TVAS for teachers in non-tested subjects reduced from 35% to 25%.	More rigorous certification exam required for evaluators, increase in number of TEAM coaches, and revision of instructional rubric to match shift in standards.	Started developing a waiver renewal application by participation of waiver expiration at end of summer 2015.  More districts modifying evaluation process through local flexibility and greater number of teachers receiving individual growth scores.	USED approved Tennessee's application for four-year waiver renewal on July 23, 2015.  Due to the Teaching Evaluation Enhancement Act, weight of student growth data will adjust during transition to new assessments.	Students began completing Constructed Response Assessments in math, applying multiple skills to solve a problem.	Districts phased in online testing with the Writing Assessment.	All students in grades 3-11 took the Writing Assessment online.  All students in grades 3-11 took the social studies field test online.	First year of TNReady, the new test in math and ELA is designed to assess true student understanding, not just basic memorization and test-taking skills.

In response to the report, Governor Bredesen and the Tennessee General Assembly formed a coalition of business and industry stakeholders to provide input and feedback, leading to the passage of the Diploma Project in 2008.<sup>8</sup> Under the Diploma Project, starting in the 2009-10 school year, students now had to earn at least 22 credits in high school using a rigorous core curriculum that included three courses in an elective area of focus. Under the Diploma Project, graduation rates began to steadily increase to the point where Tennessee's graduation rate has surpassed the national average by a strong margin.

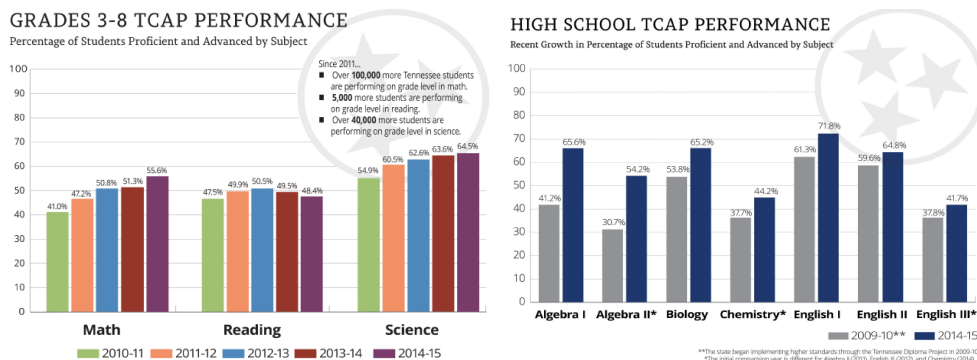
In addition to the Diploma Project, Tennessee joined other states in the development of the Common Core State Standards (CCSS), which were adopted by the State Board of Education in 2010. Tennessee has since rescinded its use of CCSS, opting instead for a Tennessee-specific set of rigorous standards and aligned assessments. The Tennessee Academic Standards are rigorous standards that push students to read, write, think, speak, and listen at a high level and which are aligned with postsecondary and career expectations.

In 2010 Tennessee was awarded the Race to the Top grant from the U.S. Department of Education to continue its work on raising expectations for students in terms of rigorous standards and aligned

<sup>8</sup> <https://www.tn.gov/education/topic/graduation-requirements>

assessments, and to launch into new areas of focus, including STEM, teacher and administrator evaluations, turning around low performing schools, and restructuring regional offices to provide academic supports in districts.<sup>9</sup> It is at this juncture that Tennessee penned its first draft of a definition of a college and career ready student as part of the grant requirements. This definition stated simply that readiness was “the knowledge and skills needed for entry-level work and college freshman coursework, and success whether pursuing a career or a college education.”<sup>10</sup> The definition proved to be overly simplistic, making it difficult to utilize for any substantive purposes. Additionally, it was written with little to no stakeholder input and did not actually call attention to career readiness as an equal partner in a student’s learning pathway.

Since 2010, Tennessee has seen continued growth on its End of Course assessments, Tennessee Comprehensive Assessment Program (TCAP), and graduation rates.<sup>11</sup> The graphs below highlight the growth in student achievement on TCAP performance for grades 3-8 and high school; growth that is occurring on rigorous assessments and standards. National assessments are also reflective of this growth. Tennessee has experienced growth on the National Assessment of Education Progress (NAEP), being the fastest improving state in both 2013 and 2015.<sup>12</sup> Most notably, and coming full circle for this state, in 2014, Tennessee was awarded an A by the U.S. Chamber of Commerce’s category of *Truth in Advertising*.<sup>13</sup>



<sup>9</sup> <https://www.tn.gov/education/topic/first-to-the-top>

<sup>10</sup> [http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN\\_Bulletin\\_22CRCDDefinitions\\_051313.pdf](http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN_Bulletin_22CRCDDefinitions_051313.pdf)

<sup>11</sup> <https://www.tn.gov/education/topic/tcap-results-at-a-glance>

<sup>12</sup> <https://www.tn.gov/governor/news/tennessee-students-still-the-fastest-improving-in-u.s.-since-2011>

<sup>13</sup> <http://www.leadersandlaggards.org/sites/default/files/Leaders%20and%20Laggards%20A%20State-by-State%20Report%20Card%20on%20K-12%20Educational%20Effectiveness.pdf>

In addition to the changes undertaken with our core academics, in 2012, the division of college, career and technical education began a multi-year, multi-phase process to overhaul the state's career and technical education (CTE) course standards to ensure that students were being provided courses that aligned with the rigor of academic coursework, postsecondary courses and offerings, and business and industry demands. This work has led to ensuring more students than ever before are being exposed to relevant, rigorous knowledge and skills development aligned with our state's priorities. Phase I involved the retiring of numerous courses and programs of study and an alignment with the 16 nationally recognized career clusters.<sup>14</sup> Phase II consisted of a complete standards rewrite of the remaining CTE courses to include a focus on industry expectations, literacy and writing. The final phase, which is taking place currently, involves the development of course exams to better assist educators in knowing the progression of their students through their programs of study.

The incorporation of postsecondary and career expectations into the K-12 discussion has continued under Commissioner McQueen. In 2015, *Tennessee Succeeds* was launched, which outlined the department's goals and priorities.<sup>15</sup> *Tennessee Succeeds* has four main goals: (1) Tennessee will rank in the top half of states on 4<sup>th</sup> and 8<sup>th</sup> grade National Assessment of Educational Progress (NAEP) in 2019, (2) 75 percent of third graders will be proficient in reading by 2025, (3) Tennessee will have an average public ACT composite score of 21 by 2020, and (4) the class of 2020 will be on track to achieve 55 percent postsecondary completion in six years.

In *Tennessee Succeeds*, there are five priority areas: *Early Foundations and Literacy*, *High School and Bridge to Postsecondary*, *All Means All*, *Educator Support*, and *District Empowerment*. Within High School and Bridge to Postsecondary the department has been focusing on areas that research have shown to increase student postsecondary and career readiness, such as early postsecondary opportunities, school counseling, work-based learning, postsecondary entrance exams ACT/SAT, and regional coalitions to drive education and economic discussions. The department also launched the Read to be Ready initiative to support early foundations that ensure students are supported on their trajectory to postsecondary and career readiness early on.

The work within the department has been concurrent to statewide changes in support of postsecondary and career readiness. In 2013, Governor Haslam launched the Drive to 55 initiative focused on having 55 percent of Tennesseans holding a postsecondary degree, certificate, or

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<sup>14</sup> <https://www.tn.gov/education/topic/career-clusters>

<sup>15</sup> <https://www.tn.gov/education/topic/strategic-plan>

credential by 2025.<sup>16</sup> Drive to 55 includes three major initiatives: Tennessee Promise, Tennessee Reconnect, and Tennessee LEAP. Tennessee Promise is a last dollar scholarship providing all eligible Tennessee seniors an award covering tuition and mandatory fees should they attend a Tennessee community college or technical college. Tennessee Reconnect is a reentry scholarship program for adults to obtain a postsecondary credential at a technical college, and Tennessee LEAP (Labor Education Alignment Program) is a grant award initiative to support postsecondary institutions in producing ready graduates by working with K-12 districts and employers.

Additionally, the Department of Labor and Workforce Development has been working to support education and workforce development through initiatives such as providing employment training and partnering with industry and secondary/postsecondary systems to promote viable learning pathways. According to the department, training in TCATs, state universities, community colleges, business and industries has a return on investment of \$38-58 dollars in wages and \$7.85 in taxes on every \$1 spent.<sup>17</sup> The Department of Economic and Community Development is developing strong community and business climates in order to attract businesses that can utilize our developing workforce. Reinforcing the work of these agencies is the acknowledgement that Tennessee is the first state to be ranked number one for economic development two years in a row by *Business Facilities*.<sup>18</sup>

Although major progress has been made, the current state of Tennessee shows that too many students still graduate from a Tennessee High School without being postsecondary and career ready. If Tennessee is to remain economically viable and competitive nationally, then it must produce an educated, skilled workforce to meet the increasing demand for skilled labor. For the 2008 cohort of high school freshman, 87 percent graduated high school, but only 56 percent entered postsecondary after graduation, and of the 75 percent who were still enrolled after one year, only six percent had completed a degree or certificate within two years.<sup>19</sup>

Tennessee lags behind the national average in ACT composite and benchmark growth.<sup>20</sup> According to the *ACT Condition of College and Career Readiness Tennessee*, in 2015, only 17 percent of Tennessee high school graduates met all four college readiness benchmarks, compared to nationally 28 percent.<sup>21</sup> In

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<sup>16</sup> <http://driveto55.org/>

<sup>17</sup> <http://www.memphis.edu/sbber/>

<sup>18</sup> <http://businessfacilities.com/2015/01/tennessee-repeats-as-bfs-state-of-the-year-2/>

<sup>19</sup> [https://www.tn.gov/assets/entities/education/attachments/ssc\\_tennessee\\_succeeds.pdf](https://www.tn.gov/assets/entities/education/attachments/ssc_tennessee_succeeds.pdf)

<sup>20</sup> The ACT composite is the average score out of 36 for the four sections of math, English, reading, and science sections of the ACT. The benchmark is 18 for English, 22 for Math, 22 for Reading, and 23 for science. The benchmarks represents a 50 percent chance of obtaining a B or higher, and a 75 percent chance of obtaining a C or higher in an aligned entry level credit bearing postsecondary course.

<sup>21</sup> <https://forms.act.org/newsroom/data/2015/states/pdf/Tennessee.pdf>

2015 the statewide average composite was 19.4 well below the 21 regarded as the threshold for postsecondary readiness. In the graduating class of 2015, only 49 percent of students scored a 21 or above. Low ACT scores decrease students' likelihood of scholarships, postsecondary enrollment and completion, while increasing the likelihood for the need for course remediation. These statistics reveal that too many of our students are lacking the skills necessary to be successful in postsecondary, and that too many students do not believe they are "postsecondary material." Not only is this indicative of a knowledge and skills gap, but a culture gap around what is being messaged to our students.

According to the Southern Regional Education Board (SREB) in 2014 Tennessee lagged behind other SREB states and the nation in terms of some college no degree, associate degree, bachelor degree, and graduate degree attainment.<sup>22</sup> In 2014 only 7.5 percent of Tennesseans had completed their associate's degree and only 17.6 percent had obtained their bachelor's degree. Postsecondary attainment is directly connected with workforce development and income. In 2014, the American Community Survey conducted by the U.S. Bureau of Economic Analysis found that Tennessee ranked 36<sup>th</sup> nationally on per capita income with an average per capita income of \$40,457.<sup>23</sup>

Tennessee's postsecondary attainment is not currently increasing to match the projected workforce needs, especially in the area of STEM. As the Tennessee Department of Economic and Community Development report *Workforce Disruption Index* revealed 1.4 million Tennessee jobs, 50 percent of the workforce, have a high probability of being replaced by automation.<sup>24</sup> Jobs replaced by automation will be replaced by new jobs, jobs that will require a higher skill set for employment.

Given the work that has and is occurring across the state of Tennessee, and the passage of the Every Student Succeeds Act (ESSA), the time is right to continue the growth and progress. It is imperative Tennessee continues to address these headwinds for our students and for the economic viability of our state.

## Definition of a Career Ready Student

The task force cultivated a definition of postsecondary and career readiness for Tennessee. The intent of the definition was set forth by the governor's workforce sub-cabinet, which sought a cross-

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<sup>22</sup> <https://www.tn.gov/assets/entities/thec/attachments/Profiles-Trends-2016.pdf>

<sup>23</sup> <https://www.tn.gov/assets/entities/thec/attachments/Profiles-Trends-2016.pdf>

<sup>24</sup> <https://goo.gl/627Fdj>

institutional, cross-sector definition that reflected the priorities of Tennessee. The definition will serve as a keystone in the state's consideration of policy, initiatives, and funding related to postsecondary and career readiness going forward. The definition is as follows.

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*In Tennessee, career-ready students are those who graduate K-12 education with the knowledge, abilities, and habits to enter and complete postsecondary education without remediation and to seamlessly move into a career that affords them the opportunity to live, work, and sustain a living wage.*

*To achieve these outcomes, students should have a clear understanding of their learning pathways from as early as middle school and possess academic and technical knowledge that can be exhibited successfully and consistently across settings and experiences. They must also possess employability skills exhibited through critical thinking, written and oral communications, collaboration, problem solving, work ethic, and persistence. With such knowledge and skills, students can pursue their career opportunities with confidence and be engaged citizens, positively contributing to their communities.*

---

## Guiding Principles

Complementary to, and inspired by, the definition, task force members developed a series of guiding principles around elements that support the development of a postsecondary and career ready student. The guiding principles illustrate the collaborative work of the task force members in examining and discussing the essential elements of student readiness. The guiding principles are organized around student learning pathways, graduation requirements, early postsecondary opportunities, career exposure, school counseling, and postsecondary career readiness measures. The guiding principles were used as the basis for the recommendations that follow.

All of the guiding principles listed below support the task force's fundamental belief that: All Tennessee students benefit from a seamless learning pathway that successfully transitions them from secondary to postsecondary, increasing their career choices, income, and quality of life. A seamless learning pathway ensures that students are provided opportunities to explore and engage in areas of interest, while providing fundamental knowledge and skills setting students up for success in whatever their chosen path.



### **Student Learning Pathways**

(a) *Tennessee students benefit from an integrated academic-technical student learning pathway for the following reasons:*

1. Integrated pathways encourage students to think about their futures in the context of personal skills and interests, workplace expectations, and career “fit.”
2. Integrated pathways allow for the development of academic and technical knowledge in a contextualized way, developing a more rigorous and broader range of skills for students.
3. Integrated pathways provide relevance to coursework and exposure to opportunities.
4. Integrated pathways prepare students for postsecondary and career.

(b) *Therefore, an integrated academic-technical student learning pathway should:*

1. Include general education requirements, CTE electives, technical skill requirements, early postsecondary opportunities, early college models, and input from community and business stakeholders.
2. Culminate in a demonstrable skill, certificate, or prior learning assessment for each student.
3. Include student voice and choice, career awareness, exploration, planning and preparation activities for students.
4. Provide seamless transition to next level of path with multiple entry and exit points along the student’s career path to ensure maximum flexibility for students to find their future path.
5. Be taught by highly qualified and trained educators and include access to current equipment.
6. Include a postsecondary/career plan and career interest inventory.

### **Graduation Requirements**

(a) *Tennessee students benefit from aligned graduation requirements for the following reasons:*

1. Graduation requirements set clear expectations for success in K-12 education and serve as the goal toward which our educators and administrators work daily.
2. Graduation requirements provide a clear articulation for postsecondary institutions and understanding for businesses about what K-12 graduates should know and be able to do.

(b) *Therefore, aligned graduation requirements should:*

1. Demonstrate students have experienced key elements to prepare them for postsecondary and career success.
2. Be aligned to real-world industry and postsecondary needs and include academic benchmarks and technical benchmarks.
3. Include some form of assessing employability skills.
4. Include postsecondary credit and a capstone experience that highlights work based learning or service learning.

### **Early Postsecondary (EPSO) Opportunities**

(a) *Tennessee students benefit from early postsecondary courses and exams for the following reasons:*

1. EPSOs increase the likelihood of completing a postsecondary certificate and/or degree by allowing students to enter postsecondary with foundational knowledge and skills, as well as allow them to experience earlier pathway-aligned courses leading to careers.
2. EPSOs provide students with the opportunities to acquire transferable postsecondary credit.
3. EPSOs decrease the time and money required to obtain a postsecondary credential, placing students on an accelerated path.
4. EPSOs increase access to more challenging learning environments earlier in a student's pathway, building student confidence.

*(b) Therefore, an early postsecondary experience should:*

1. Include a portfolio of opportunities at the secondary level, such as local dual credit, statewide dual credit, dual enrollment, AP, CLEP, international baccalaureate, Cambridge international examinations, and industry certifications.
2. Be available to all students, regardless of background.
3. Be taught by highly qualified and trained educators, allowing students to receive full credit articulation at all Tennessee institutions.
4. Align with state secondary standards, postsecondary expectations, and industry expectations.
5. Provide low or no-cost options for students to obtain postsecondary hours and credits.
6. Seamlessly articulate across all postsecondary institutions (TCATs, community colleges, 4-years).

### **Career Exposure and Experience**

*(a) Tennessee students benefit from career exposure/experience for the following reasons:*

1. Career exposure/experience provides students with awareness and understanding of potential career opportunities.
2. Career exposure/experience offers an access/equity element that opens doors that may not be available otherwise to students.
3. Career exposure/experience motivates students to move purposefully along secondary programs of study and they see relevance to their own goals.
4. Career exposure/experience supports the development of employability (soft) skill attainment, which provides a foundation for students to achieve success in postsecondary classrooms and workplaces.

*(b) Therefore, a career exposure/experience should:*

1. Exist across K-12 and not be focused solely in high school.
2. Offer exposure to progressive meaningful and rigorous experiences from awareness to exploration to immersion.
3. Be aligned to career opportunities in high demand/varied fields to allow for greater employer involvement.

4. Allow students to transfer experience seamlessly into careers and postsecondary programs.
5. Connect opportunities for students to discover passions and interests.
6. Reflect employability (soft) skills integration throughout K-12 and be taught in conjunction with any course content.

### **Counseling/Advising**

*(a) Tennessee students benefit from counseling/advising for the following reasons:*

1. Counseling appropriately advises students through student-developed plans.
2. Counseling allows students to be more aware and better prepared for seamless transitions into postsecondary and careers.
3. Counseling allows students to understand regional and statewide options and what will be needed in order to pursue them.
4. Counseling supports students with their social and personal development, which are reflective of several employability skills critical to future success.

*(b) Therefore, student counseling/advising should:*

1. Start in elementary school (K-5) with the career ready student definition in mind.
2. Support students in appropriate placements and scheduling of courses to achieve desired postsecondary and career goals.
3. Include mentoring and coaching.
4. Work with students and their parents to create and routinely review (and update when needed) postsecondary and career plans.
5. Include additional community and school stakeholders, allowing for a collective and integrated advising model.
6. Provide students with accurate information about careers, postsecondary pathways, and the requirements and income associated with them in order to drive informed decision-making.

### **Postsecondary and Career Readiness Measures**

*(a) Tennessee students benefit from postsecondary and career readiness accountability measures for the following reasons:*

1. Accountability measures incentivize more equitable access to programs of study that prepare students for productive, healthy, and civically engaged lives.
2. Accountability measures keep students and schools on track to achieving goals and should ensure that no students fall through the cracks.
3. Accountability measures provide both students and families with information to advocate and self-monitor the achievement of identified goals.
4. Accountability measures support gap closure and highlight key learning priorities.
5. Accountability measures provide data transparency to help drive informed decision-making.

*(b) Therefore, postsecondary and career readiness accountability measures should:*

1. Directly align with career and technical education course standards and technical skills attainments.
2. Reflect early postsecondary credit and hours attainment.
3. Identify and include indicators of employability skills attainment.
4. Provide feedback on benchmarks indicating where a student is on track (e.g. ACT, industry certifications, capstones, remediation, etc.)
5. Provide easily-comprehensible reports such that educators, parents, and students can access and understand information.
6. Be actionable and measurable with stakeholder input/control attached to it.

# Recommendations

The following 23 recommendations were developed using the guiding principles as the framework or lens to shape priorities and opportunities for the state of Tennessee. The recommendations outlined below are grouped into the next 1-12 months and 24-36 months, meaning the recommendations should be implemented during those time periods. These were determined by priority, complexity, and capacity. Recommendations fall into three areas (1) postsecondary and career readiness, (2) student supports, and (3) data and accountability.

## ***Recommendations (1-12 months)***

### **Postsecondary and Career Readiness**

1. The department should exhibit and promote where alike career and technical and general education course content and standards exist and/or overlap to show cross-subject instructional opportunities and to reinforce writing, ELA, and math for districts.
2. Districts should select career and technical programs of study that are aligned fully with regional/local industry demand (current/projected) and postsecondary programs and credentials and that lead to living wage or higher employment. Districts should retire any programs of study that do not meet these criteria.
3. The department should propose budget improvements to the General Assembly for the purchase of secondary career and technical education equipment for programs of study that are workforce and postsecondary aligned in the advanced manufacturing, IT, and health care sectors.
4. The department should examine current graduation requirements and make recommendations to the current course portfolio to ensure students have the opportunity to pursue courses that are aligned with and fully promote postsecondary and career readiness opportunities.
5. The department should propose budget improvements to the General Assembly that would provide ongoing investments for early postsecondary course and exam opportunities for secondary students.
6. To increase student access to early postsecondary courses and exams, the department should encourage districts and teachers to obtain necessary certifications (in keeping with SACS requirements) that will qualify teachers to also serve as adjunct postsecondary faculty.
7. The department should develop guidance, utilizing student data and tools, that assists districts in identifying and providing positive, appropriate interventions along the K-12 continuum in order to reduce achievement gaps and remediation and to increase the number of students who are appropriately placed in high level coursework, early postsecondary courses and exams, and career interest pathways.

### **Student Supports**

8. To drive appropriate advisement on student course selections, career interests, and postsecondary pursuits, the State Board of Education should require all students to consider and formulate a secondary/postsecondary/career plan during grade 7 and to revisit this plan to make necessary adjustments in grade 10. To complement plan development, students must take a department promoted career interest inventory in the grade 7 and 10.
9. To incent industry sector employers to participate in department sanctioned work-based learning opportunities, the department should propose to the General Assembly that it consider incentives (tax credits or funding) tied to the placement of students and the successful completion of placement requirements; additionally, the department should propose to the General Assembly that it consider setting forth policy and legislation to remove all perceived work-based learning barriers to employing and/or exposing students under age 18 in certain industry sectors.
10. The department should collaborate with postsecondary educator preparation programs to ensure future school counselors receive rigorous training and coursework that is specific to postsecondary and career counseling.
11. The department should propose budget improvements to the General Assembly for increased funding for counseling (BEP formula).

### **Data and Accountability**

12. The department should establish a set of employability skills with aligned rubric developed in collaboration with districts, postsecondary systems, and employers that is utilized by all content area educators in order to drive the integration of these skills development through regular, ongoing instruction and modeling.
13. The department should encourage the use of the "Progress Toward Career Readiness" indicator on the ACT student report card by businesses. The indicator shows a student's potential achievement on the ACT National Career Readiness Certificate (Bronze, Silver, or Gold).
14. The department should publish district and school student sub-group enrollment in early postsecondary courses and should incentivize districts who increase student early postsecondary course and exam enrollment and completion and who close student participation and achievement gaps in this area.
15. The student to school counselor ratio should be displayed on district and school report cards.

## ***Recommendations (24-36 months)***

### **Postsecondary and Career Readiness**

16. Districts should ensure all students graduate with technological literacy skills, by teaching keyboarding in elementary schools, basic computer applications in middle school, and more specific technology skills in high school.
17. The Tennessee Board of Regents and the department should offer dual enrollment courses using the co-requisite remediation model for high school seniors.
18. To increase student access, select dual enrollment courses, which are taught by postsecondary faculty, should be made available at high school campuses.

### **Student Supports**

19. Districts should pursue a K-12 approach to ensure that students (and their parents/guardians) are fully informed consumers of their postsecondary and career opportunities through various communication mediums.

### **Data and Accountability**

20. The department should develop formative and portfolio exams for career and technical courses to show successful student progression of mastery within a program of study.
21. The department should promote the placement of select achievements on high school diplomas and/or transcripts for students who graduate with an industry certification, WorkKeys medallions, or work ethic diploma (or comparable).
22. Utilizing the state's P20W data system, the department should provide access to timely data for district decision making and strategic planning; in order to achieve this, the department should lead discussions with other participatory agencies and the Governor's Office on shared data protocols and data matching protocols in order to drive aligned state and agency policy and funding decisions.
23. The department should align the career ready student definition with appropriate accountability measures being developed for the department's state plan under Every Student Succeeds Act (ESSA); this could include, but would not be limited to: the development of a district level weighted student postsecondary and career readiness opportunity index that includes: (1) early postsecondary course and exam attainment and/or, (2) career and technical program of study completion (3 or more courses), and/or (3) capstone industry certification attainment (within three months post high school graduation).

## ***Further Analysis***

There were recommendations discussed by the task force that were deemed in need of additional information and analysis. Areas for further research and analysis that the department should explore before executing are outlined below.

1. The department will continue to discuss the potential for utilization of WorkKeys by secondary students.
2. The Tennessee Board of Regents and the University of Tennessee systems should establish policy that sets criteria for the acceptance/awarding of postsecondary credit by public postsecondary institutions to ensure consistency for secondary students prior to matriculation.
3. The State Board of Education should include in its comprehensive school counseling policy a requirement for school counselors and their administrators to complete annually a program management agreement (prior to the start of each academic year) that includes school-based goals, budget, program content, and roles and responsibilities.
4. The department should pilot early college models that lead to secondary students graduating high school with postsecondary credentials. Successful models would be promoted for build out by districts statewide.
5. The department should pursue policy changes that would require all students to complete a capstone experience: work-based learning or service learning.
6. In order to attract and retain high quality occupationally licensed teachers, the department should consider implementing an alternative pay scale where first year occupationally licensed teachers receive entry pay based on the number of employed years in their specialty.
7. The department should create an electronic student plan template that is utilized by districts. This plan should be accessed and monitored by district leadership and by students and parents to ensure that all students are receiving appropriate and timely advisement.
8. The department should pursue policy changes that will require all students to enroll and complete at least two early postsecondary courses prior to graduation from high school.
9. Each department CORE office should have a regional career counselor to assist districts in advising students on postsecondary and career opportunities.



## Conclusion

The task force believes that all students must graduate high school postsecondary and career ready and should transition seamlessly and successfully to postsecondary and career. To achieve this, the task force has put forth a definition, guiding principles, and recommendations, which if actualized will lead to the development of a ready citizenry that fuels a sustainable economic viability for the state of Tennessee,

The task force recommends that the commissioner and department staff begin detailing specific owners for each recommendation and accompanying action steps, as well as an associated timeline to ensure completion. The task force recommends that these principles and recommendations be revisited annually to ensure that they remain current and relevant.

# Appendix

# Appendix

## **March Meeting Materials**

- Agenda and PowerPoints
- Meeting Notes
- Follow-up Memo
- Handouts and Readings

## **April Meeting Materials**

- Agenda and PowerPoints
- Meeting Notes
- Follow-up Memo
- Handouts and Readings

## **May Meeting Materials**

- Agenda and PowerPoints
- Meeting Notes
- Follow-up Memo
- Handouts and Readings

## **June Meeting Materials**

- Agenda and PowerPoints
- Meeting Notes
- Follow-up Memo.
- Handouts and Readings

## **July Meeting Materials**

- Agenda and PowerPoints
- Meeting Notes
- Follow-up Memo

## **August Meeting Materials**

- Agenda
- Meeting Notes
- Follow-up Memo

# March Meeting Materials


## Career Forward Task Force

### Agenda

March 24, 2016

*Light Breakfast - (Optional) starting at 8:15am*

- |       |  |            |
|-------|--|------------|
| I.    | <i>Introductions &amp; Welcome</i><br>Dr. Candice McQueen<br>TN Commissioner of Education  | 8:30 a.m.  |
| II.   | <i>Call to Action: Tennessee's Opportunities</i><br>Dr. Danielle Mezera<br>Assistant Commissioner of Education   | 9:00 a.m.  |
| III.  | <i>Small Group Exercise</i>  | 9:25 a.m.  |
| IV.   | <i>Juxtaposition of Education and Industry</i><br><i>National and Global Perspectives and Models</i><br>Robert (Bob) Schwartz<br>Harvard Graduate School of Education,<br>Pathways to Prosperity Network | 9:45 a.m.  |
| V.    | <i>Break</i>   | 10:30 a.m. |
| VI.   | <i>One Company's Approach to Engaging in Education</i><br>Maura Banta<br>Director, Global Citizenship Initiatives in Education<br>Corporate Citizenship & Corporate Affairs, IBM                         | 10:45 a.m. |
| VII.  | <i>Lunch</i>   | 11:30 a.m. |
| VIII. | <i>One State's Approach to Defining Postsecondary</i><br><i>and Career Readiness: A Fireside Chat</i><br>Maura Banta and Bob Schwartz  | 11:50 a.m. |
| IX.   | <i>Small Group Discussions: Reflections of Salient Points</i>  | 12:30 p.m. |
| X.    | Dismissal  | 1:00 p.m.  |



## Career Forward Task Force

March 24, 2016

### OVERVIEW of AGENDA

- Welcome and Introductions
- Charge and Approach
- Call to Action
- Small Group Exercise
- Education and Industry Presentation
- BREAK
- One Company's Approach Presentation
- LUNCH
- One State's Approach Presentation
- Small Group Discussion & Reflection

TN Department of Education Career Forward Task Force 2

### CHARGE

- Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
- Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.

TN Department of Education Career Forward Task Force 3

### APPROACH

**The Task Force will meet monthly to learn, listen, discuss, and craft recommendations. In doing so, the Task Force will work to answer three guiding questions.**

1. How do we know when a student is "career ready" at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state's economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

TN Department of Education Career Forward Task Force 4

### OUR GOALS

<p style="font-size: 2em; font-weight: bold;">1</p> <p>Tennessee will continue rapid improvement and rank in the top half of states on the Report Card.</p> <p style="font-size: small;"><b>MEASUREMENT</b> Tennessee will rank in top half of states on 4<sup>th</sup> and 8<sup>th</sup> grade NAEP in 2019.</p>	<p style="font-size: 2em; font-weight: bold;">2</p> <p>The average ACT score in Tennessee will be a 21, allowing more students to earn HOPE scholarships.</p> <p style="font-size: small;"><b>MEASUREMENT</b> Tennessee will have an average public ACT composite score of 21 by 2020.</p>	<p style="font-size: 2em; font-weight: bold;">3</p> <p>The majority of Tennessee high school graduates will earn a certificate, diploma, or degree.</p> <p style="font-size: small;"><b>MEASUREMENT</b> The class of 2020 will be on track to achieve 55% postsecondary completion in six years.</p>
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TN Department of Education Career Forward Task Force 5

### OUR PRIORITIES

- Early Foundations & Literacy**  
Building skills in early grades to contribute to future success
- High School & Bridge to Postsecondary**  
Preparing significantly more students for postsecondary completion
- All Means All**  
Providing individualized support and opportunities for all students with a focus on those who are furthest behind
- Educator Support**  
Supporting the preparation and development of an exceptional educator workforce
- District Empowerment**  
Providing districts with the tools and autonomy they need to make the best decisions for students

TN Department of Education Career Forward Task Force 6



## Career Forward Task Force Call to Action

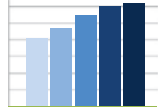


## Our Landscape

### SUCCESSES TO DATE



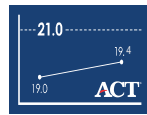
Fastest improving state in the nation on 4<sup>th</sup> and 8<sup>th</sup> grade NAEP



Consistent gains on TCAP every year since new assessments in 2010



Fastest growing graduation rate of any state



ACT statewide average has increased to 19.4



### TENNESSEE'S ACCOLADES

First-ever back-to-back State of the Year winner for economic development 2013 and 2014  
*Business Facilities*

**#4**

State for jobs created through FDI in 2014  
*IBM's Global Location Trends Report*

**#1**

Certified Sites and Shovel-Ready Programs  
*Area Development*

**#1**

Education: Race to the Top Leaders  
*Business Facilities*

**#1**

Overall Infrastructure and Global Access  
*Area Development*

**#1**

Automotive Manufacturing Strength  
*Business Facilities*

**#2**

Best Business Climate  
*Business Facilities*



### TN ECD "TOP 10" INDUSTRIES

- Advanced Manufacturing
- Aerospace & Defense
- Automotive
- Business Services
- Chemicals, Plastics & Rubber
- Energy Technology
- Film, Music & Entertainment
- Food & Agribusiness
- Healthcare & Medical Devices
- Transportation, Distribution & Logistics



## Governor's Workforce Subcabinet

## TYING EDUCATION AND INDUSTRY

### Charge:

The Governor's Workforce Subcabinet will develop, implement, and oversee implementation of a three year strategic plan that fully aligns state resources in an effort to attain the Drive to 55 goal.

### Recommendation:

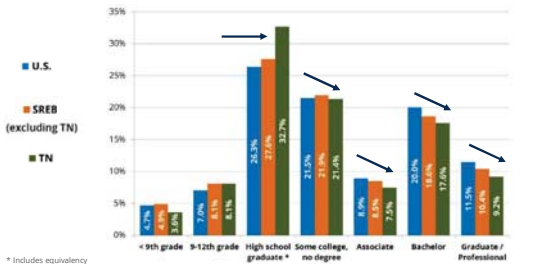
Tennessee will promote a state-specific definition of postsecondary and workforce readiness that is reflective of a collaborative cross-agency approach leading to the development of seamless academic-career pathways to the benefit of its citizenry and industries.



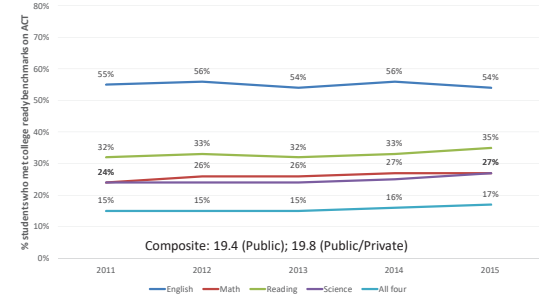
Headwinds...

## TRANSITION FROM SECONDARY TO POSTSECONDARY

Educational Attainment of Adult Population (25-64): U.S., SREB States, and Tennessee (2014)

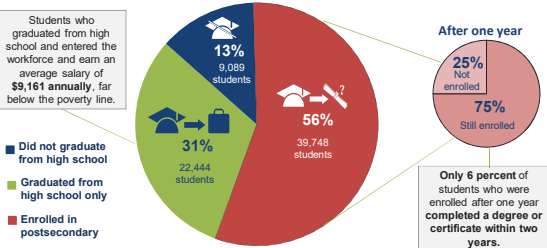


## IMPROVEMENTS ON THE ACT EXAM HAVE NOT BEEN SIGNIFICANT

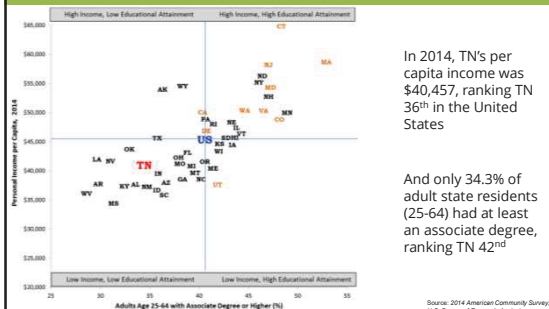


## SUCCESS AFTER GRADUATION

71,403 Students  
2008 Cohort of High School Freshmen



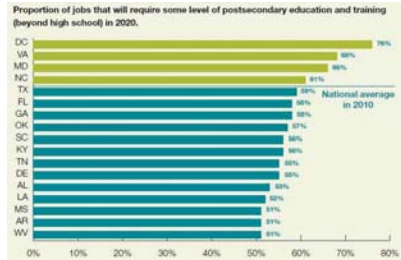
## INTERCONNECTEDNESS OF INCOME TO EDUCATION





## JOB-POSTSECONDARY ATTAINMENT

In 2010, the national average for job-to-postsecondary attainment was 59%; 13 southern states will still not have met this current national average by 2020.



NOTE: By 2020, the national average is projected to climb to 66%.

## STEM-RELATED OCCUPATION GAPS IN TN

- 88% of STEM jobs will require some form of postsecondary education or training by 2018.
- In 2012 there were 252,000 STEM-related employees in Tennessee.
  - By 2022, the level is expected to increase to 295,000 jobs.
- Of the core STEM-related occupations, nearly 40% of job growth will come from the Computer and Mathematical occupational groups.
- Nearly 4 in 5 STEM postsecondary students (78%) say that they decided to study STEM in high school or earlier.
- Only one in five (21%) decided in middle school or earlier.
- Between 2011 and 2015, the percent of students interested in STEM decreased by 1% while STEM-related occupations increased.

<sup>1</sup> Tennessee Department of Labor and Workforce Development. (2014). STEM: The Demand for STEM Occupations in Tennessee. On the Internet at: <https://www.tn.gov/about/agencies/education/education/STEMReport.pdf>. (retrieved on November 16, 2015)



## OUR CHALLENGES

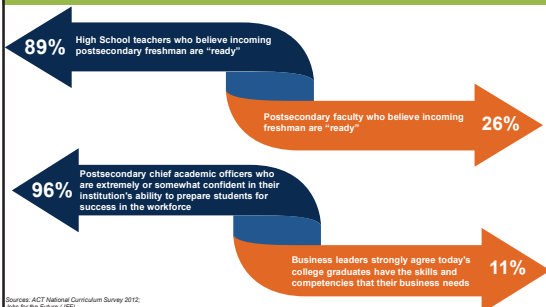
1/2

Roughly **HALF** of all Americans reach their mid-20s without the skills or credentials essential for success in today's increasingly demanding economy

50%

Source: Job for the Future (JFF)

## MISMATCHES IN "READINESS"



Sources: ACT National Curriculum Survey 2012; Job for the Future (JFF)

## MISMATCHES IN "PREPAREDNESS"

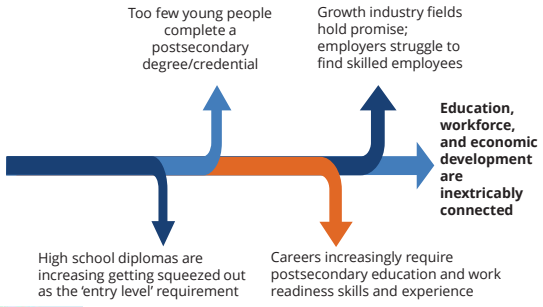


Source: Bentley University Study 2014



**Call to Action:  
Tennessee's  
Opportunities**

### EDUCATION/CAREER PATHWAYS



Too few young people complete a postsecondary degree/credential

Growth industry fields hold promise; employers struggle to find skilled employees

**Education, workforce, and economic development are inextricably connected**

High school diplomas are increasing getting squeezed out as the 'entry level' requirement

Careers increasingly require postsecondary education and work readiness skills and experience

TN Department of Education Career Forward Task Force 26

### QUESTIONS?



TN Department of Education Career Forward Task Force 27

### SMALL GROUP EXERCISE


- What do you see as the key issue(s) facing TN in this area?
- What do you believe are the key attributes that a "ready" person must have entering into the workforce?

TN Department of Education

**Pathways to Prosperity Network**  
 A MEMBERSHIP OF PROSPERITY COLLEGE AND THE HARVARD GRADUATE SCHOOL OF EDUCATION

## Juxtaposition of Education and Industry National and Global Perspectives and Models

Robert (Bob) Schwartz  
 Harvard Graduate School of Education,  
 Pathways to Prosperity Network



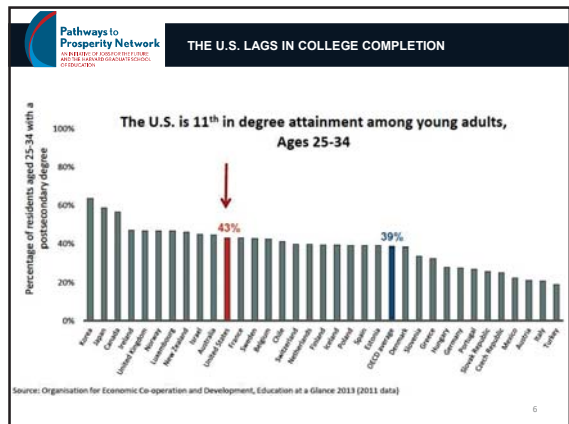
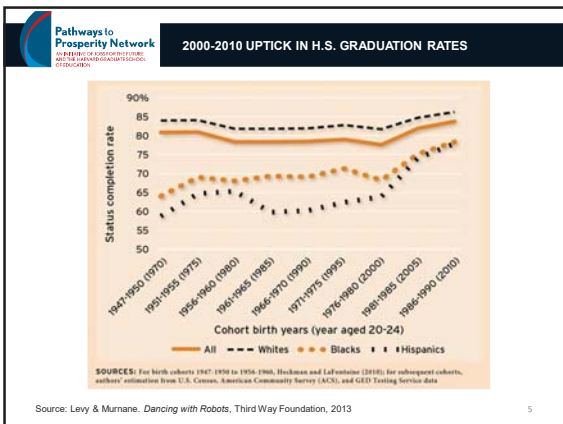
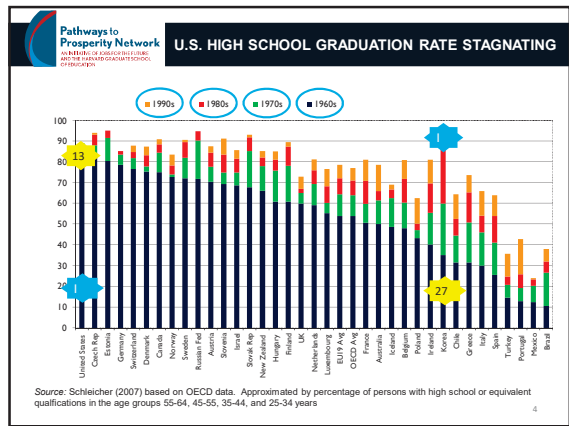
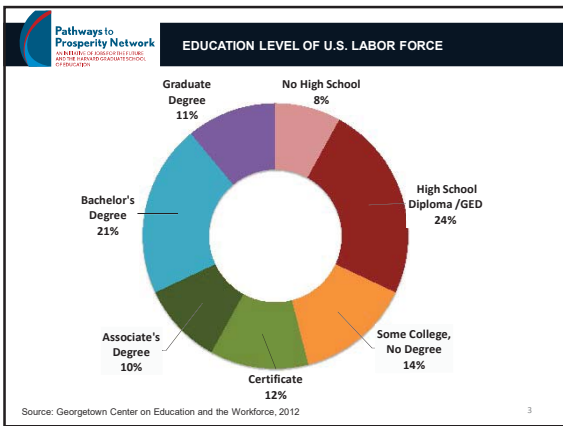
**Pathways to Prosperity Network**  
 A MEMBERSHIP OF PROSPERITY COLLEGE AND THE HARVARD GRADUATE SCHOOL OF EDUCATION

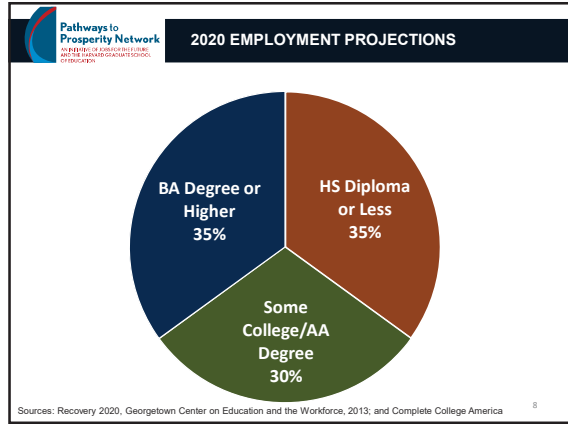
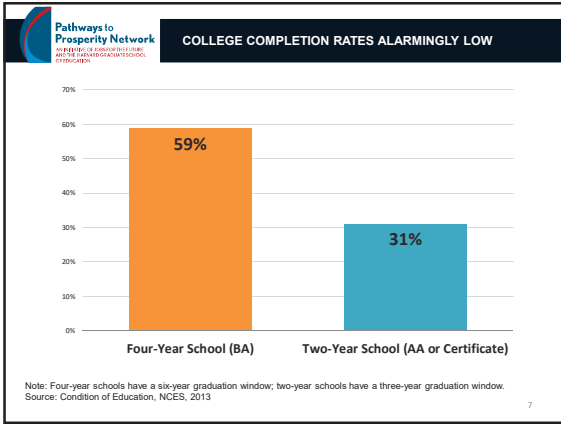
## THE PATHWAYS TO PROSPERITY REPORT

**“The American system for preparing young people to lead productive and prosperous lives as adults is clearly badly broken. Failure to aggressively overcome this challenge will surely erode the fabric of our society.”**



2





### EXAMPLES OF JOBS THAT REQUIRE MIDDLE SKILLS

Sector	Type of Job	Number of Openings	Median Annual Pay
Computers & IT	Computer Support Specialists	607,100	\$46,260
Engineering	Electrical Technicians	151,000	\$56,040
Health Care	Respiratory Therapists	112,700	\$54,280
Life, Physical & Social Sciences	Environmental Science Technicians	29,000	\$41,380
Production	Semiconductor Processors	21,100	\$33,130

Source: "Who Can Fix the Middle Skills Gap?" Harvard Business Review, 2012; T Kochan, D Finegold, P Osterman Data from Occupational Outlook Handbook, U.S. BLS, 2010

### OCCUPATION MATTERS

- 43% of young workers with Licenses and Certificates earn more than those with an Associate's degree
- 27% of young workers with Licenses and Certificates earn more than those with a Bachelor's degree
- 31% of young workers with an Associate's degree earn more than those with a Bachelor's degree

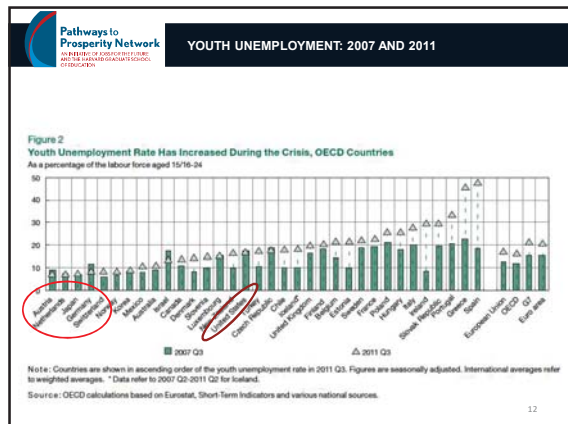
Source: Georgetown University Center on Education and the Workforce

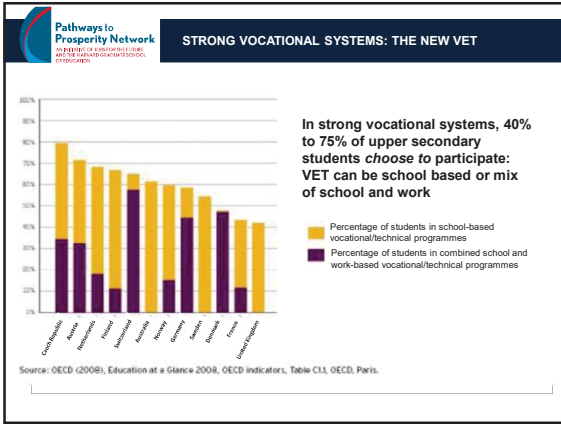
### STEM OPPORTUNITIES ABOUND

Previous STEM studies have neglected the many blue collar and technical jobs that require considerable STEM knowledge. But this study finds that **50% of STEM jobs do not require a bachelor's degree**. As a result, STEM knowledge plays a much larger role in our economy than previously thought:

- There are **26 MILLION** STEM jobs in the U.S.
- STEM jobs comprise **20%** of all U.S. jobs.
- The share of jobs requiring STEM knowledge has **doubled** since the Industrial Revolution.

Source: The Hidden STEM Economy, Brookings, 2013





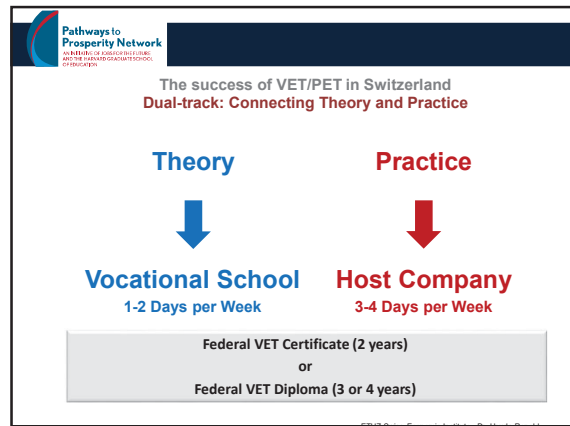
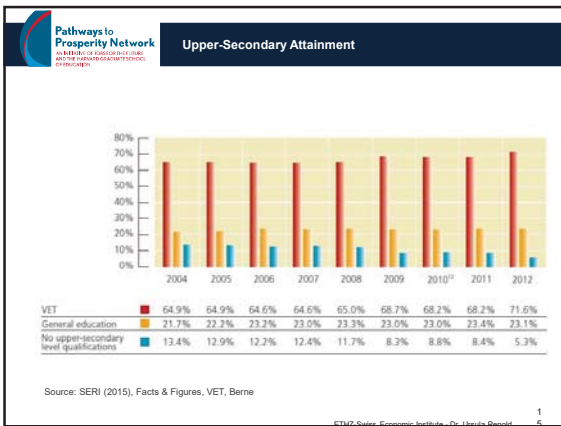
**Pathways to Prosperity Network**  
AN ALLIANCE OF EDUCATION LEADERS AND THE SWISS CONFEDERATION OF EDUCATION

### Competitiveness: Switzerland at the Top

Ranking	European Innovation Scoreboard	Global Competitiveness Report	World Competitiveness Yearbook	Global Talent Competitiveness Index 2014
1	Switzerland	Switzerland	Hong Kong	Switzerland
2	Sweden	Singapore	USA	Singapore
3	Denmark	Sweden	Switzerland	Luxembourg
4	Germany	Finland	Singapore	United States

Sources:  
ESI: European Innovation Scoreboard, 2012  
WCI: Global Competitiveness Report, 2012  
IMD: World Competitiveness Yearbook, 2012  
GTCI: Global Talent Competitiveness Index, 2014

ETHZ-Swiss Economic Institute - Dr. Ursula Renold 14



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### THE PATHWAYS TO PROSPERITY STATE NETWORK: AN OVERVIEW

FROM REPORT TO ACTION

ETHZ-Swiss Economic Institute - Dr. Ursula Renold 18

**Pathways to Prosperity Network**  
AN ALLIANCE OF EDUCATION LEADERS AND THE BUSINESS/GRADUATE SCHOOL COMMUNITY

### THE PATHWAYS TO PROSPERITY NETWORK

Twelve states with 40+ regions, rural to urban, serving as starting places for demonstrating success, with a focus on scaling grades 9-14 integrated academic and career pathways statewide. **Not a new program or add-on reform, but a strategic alignment and bolstering of existing initiatives to improve education, workforce, and economic outcomes.**

**Pathways to Prosperity Network**  
AN ALLIANCE OF EDUCATION LEADERS AND THE BUSINESS/GRADUATE SCHOOL COMMUNITY

### OUR GOAL: SYSTEMS OF 9-14+ PATHWAYS

**ALL YOUNG PEOPLE**

- Complete high school with at least 12 college credits and WBL experience
- Attain postsecondary credential with value in regional labor market
- Launch a career in a high-demand, high-growth, high-wage occupation
- Advance in career and pursue further education as interested

**Pathways to Prosperity Network**  
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### NATIONAL SCOPE FOR EVIDENCE BASE

#### Early College High Schools

- Located in 26 states and the District of Columbia
- Around 300 schools from initial JFF Gates initiative; others started on their own
- Serve over 100,000 students
- Annual gathering of ~600 faculty, principals, and leaders

JFF JOBS FOR THE FUTURE

**Pathways to Prosperity Network**  
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### OUTCOMES FROM EXTERNAL EVALUATION

- High School Graduation Rate: 92 percent
- College Enrollment Rate: 86 percent
- 1 Year + Transferrable Credits: 44 percent
- Earned Associate's Degree: 25 percent

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### % OF GRADUATES ENROLLING IN COLLEGE

Category	% of Graduates Enrolling in College
Early College Schools	78%
National Average	69%
National Average for Low-Income Students	55%

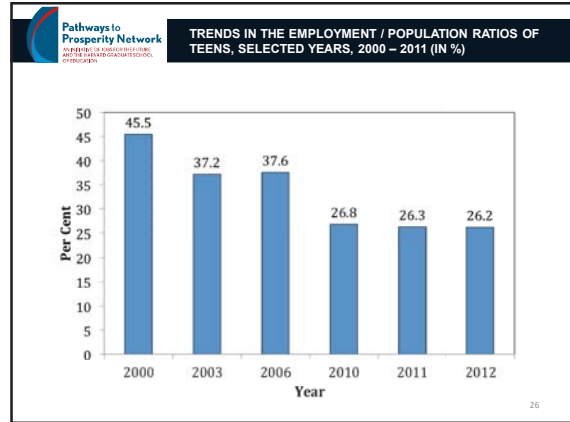
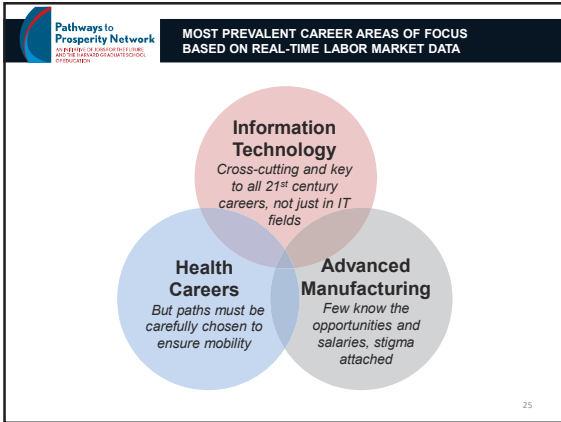
JFF JOBS FOR THE FUTURE

**Pathways to Prosperity Network**  
AN ALLIANCE OF EDUCATION LEADERS AND THE BUSINESS/GRADUATE SCHOOL COMMUNITY

### KEY PATHWAYS IMPLEMENTATION LEVRS

**Rigorous Academic and Career 9-14 Pathways**

- Engaged employers: work-based learning opps. & curricula support
- Intermediary links between education and employers
- Committed state leaders and favorable policy environment
- Early, sustained career counseling and information



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 617.496.6303

**PATHWAYS TO PROSPERITY PROJECT**  
AN INITIATIVE OF THE JOHNS HOPKINS UNIVERSITY  
 CENTER FOR TALENTED-GIFTED STUDENT EDUCATION  
 FEBRUARY 2011

## P-TECH Grades 9-14 School Model

Maura Banta  
Corporate Citizenship & Corporate Affairs  
IBM Corporation

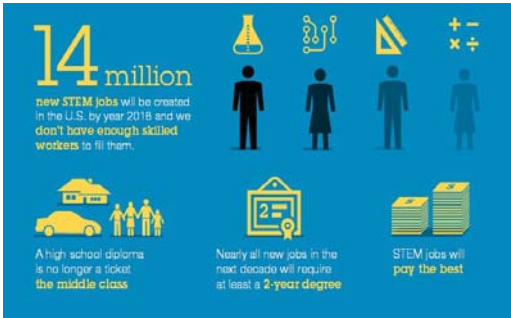


## Brooklyn High School – a Profile

**P-TECH**  
Pathways in Technology  
Early College High School



## The context for our work



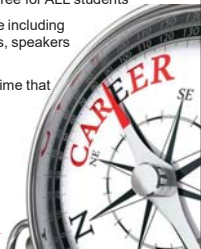
## A new model for education: P-TECH 9-14

- **Focus:** A new grade 9-14 public school model focused on STEM fields and Career and Technical Education
- **Mission:** Enable students to master the skills that they need either to graduate with a no-cost Associates in Applied Science (AAS) degree that will enable them to secure an entry-level position in a growing STEM industry, or to continue and complete study in a four-year higher education institution.

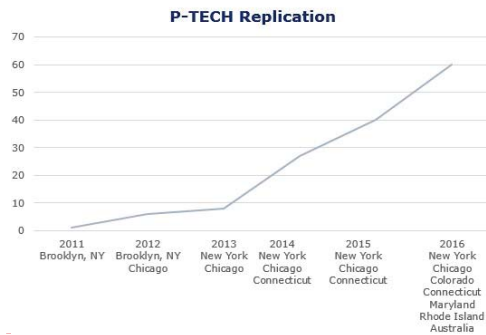
**P-TECH: The pathway from classroom to career to a stronger economy**

## Key Tenets

- **Systemic Partnership:** K-12, higher education, and industry
- **Public School Model:** Open to all students, with no cost to students and their families
- **Early College:** Six-year scope and sequence *integrating* high school and college coursework and leading to an AAS degree for ALL students
- **Career-Readiness:** Workplace Learning sequence including skills mapping, coursework, mentors, worksite visits, speakers and skills-based, paid internships
- **Personal Pathways:** Focus on mastery, not seat time that enables students to graduate in 4, 5, or 6 years



## High School Re-design Movement





## IBM partner schools

### 1. Pathways in Technology Early College High School (P-TECH) :

Partnership: New York City Department of Education, The City University of New York, New York City College of Technology, IBM

### 2. Sarah E. Goode STEM Academy:

Partnership: Chicago Public Schools, City Colleges of Chicago, Richard J. Daley College, IBM

### 3. Excelsior Academy:

Partnership: Newburgh Enlarged City School District (NY), SUNY Orange, IBM

### 4. Norwalk Early College Academy:

Partnership: Norwalk Public Schools (CT), Norwalk Community College, IBM



## Real Results

### P-TECH Brooklyn, NY (2011)

**Student Profile:** 522 students; 70% male; 30% female; 96% Black or Hispanic; More than 80% free or reduced lunch; 16% IEPs; 90% average attendance

#### College Readiness: Algebra

- 84% of students from first cohort after eight semesters (4 years)
- 64% of students from second cohort after six semesters (3 years)
- 40% of students from third cohort after four semesters (2 years)

#### College Readiness: English

- 82% of students from first cohort after eight semesters (4 years)
- 71% of students from the second cohort after six semesters (3 years)
- 50% of students from the third cohort after four semesters (2 years)

### Goode Chicago, IL (2012)

**Student Profile:** 835 students; 50% male; 50% female; 97% Black or Hispanic; More than 88% free or reduced lunch

- 93% average attendance

#### Academic Achievements

- Fall 2015: 133 students enrolled in college classes
- Of 12<sup>th</sup> grade students, 17 have earned a total of 20 or more college credits
- Of students who were enrolled in college courses for spring 2015:
  - 50 earned between 3 and 6 credits
  - 30 earned between 9 and 15 credits
  - 22 earned between 16 and 25 credits
  - 17 earned between 26 and 30 credits

## Real Results

### Excelsior Newburgh, NY (2014)

**Student Profile:** 100 students; 54% male; 46% female; 54% Hispanic, 32% Black, 13% White, 1% Asian; 74% free or reduced lunch; 8% IEPs; 95% attendance rate

#### Academic Achievements

- 56% of all students made honor roll for the 2014 – 15 school year (overall average of 84.5 or above)
- 90% pass rate: New York State Regents Exam for U.S. History
- 76% pass rate: New York State Regents Exam for Algebra I
- 78% (39 of 50) rising 10<sup>th</sup> grade students will be enrolled in college coursework (fall 2015)

### NECA Norwalk, CT (2014)

**Student Profile:** 153 students  
61% male; 39% female; 48% Hispanic; 34% Black; 14% White; 4% Asian

#### Academic Achievements

- 40% of students placed into college-level English and mathematics by the end of Year 1
- 28% of students achieved high honor roll (GPA of 3.4 or higher)
- 22% of students achieved honor roll (GPA of 3.0 – 3.39)

## The First Six: P-TECH Brooklyn Graduates

June 2015: Six students graduated with their high school diplomas and AAS degrees



- Accelerated through the program in 4 years
- All graduated with AAS in Computer Information Systems, awarded by New York City College of Technology

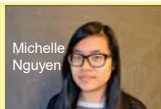
## “The First Six”: College Bound



- Born in Ghana, immigrating to the U.S. at age 7
- First in family to graduate with a college degree
- 3.6 GPA in college courses
- Internship with IBM Research, where he created a web site on 3-D printing
- Syracuse University



- Member of Robotics Team and Math Squad
- Internship with IBM Research, where he explored 3-D printing and augmented reality
- Macaulay Honors College, Queens College – where he intends to pursue his Bachelor's in computer science



- First student to take college calculus as a Sophomore and earned an "A"
- Internship with IBM Research, where she explored augmented reality and how it could be used in healthcare and education
- Long Island University

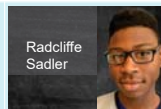
## “The First Six”: New IBMers



- Entered high school as average student
- First in family to graduate with a college degree
- One of nation's top sprinters (400m)
- Internship with IBM's Global Technology Services
- Will join IBM Market Development & Insights as an Associate Analyst



- First in his family to graduate with a college degree
- Internship with IBM Digital Marketing; according to his supervisor, Gabriel is "one of the brightest high school students I've ever met."
- Turned internship into a job offer and will join IBM as a Digital Commerce Specialist

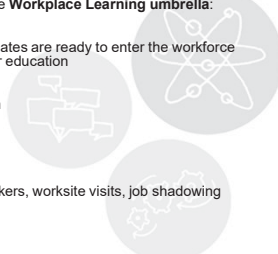


- Introduced President Obama at P-TECH Brooklyn in 2013
- Internship with IBM Sales & Distribution, conducting research on the insurance industry
- Will join IBM Market Development Insights team as an Associate Analyst

## Key innovation: Industry partnership

Industry is a full partner in all aspects of the school, but has special responsibility over the **Workplace Learning umbrella**.

- Skills mapping to ensure graduates are ready to enter the workforce and/or pursue continued higher education
- Workplace Learning curriculum
- **Mentors for all students**
- Workplace experiences: Speakers, worksite visits, job shadowing
- Skills-based, paid internships
- First in line for jobs



## Mentoring

**men·tor** *noun* [men-tawr, -ter]

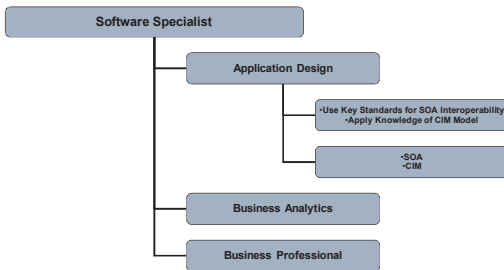
**noun**

1. a wise and trusted counselor or teacher.
2. an influential senior sponsor or supporter.

- All students are paired with an IBM mentor/industry professional who:
  - Inspires, encourages, role models
  - Provides meaningful feedback on coursework
  - Provides guidance, strategies and tools for navigating through the school program, including high school and college courses
  - Serves as a window into careers, emphasizing workplace learning skills

## IBM Skills Mapping Process

- Map hard/soft skills to IT jobs requiring an AAS degree
- Skills feed into curriculum development



## Workplace Learning Curriculum

Industry works with teachers and faculty to develop coursework focused on employability skills

- Creativity and innovation
- Flexibility and adaptability
- Communication of complex ideas, orally and in writing
- Ability to work within and lead multi-cultural teams
- Critical thinking and problem solving skills
- Awareness of core societal challenges impacting the way we do business in the 21st century
- Highest global integrity standards

### IBM Employment

Are you a problem solver?  
Are you a difference maker?  
Are you an innovator?  
**Help us build a smarter planet**



## Internships

- Skills-based, paid internships for eligible students beginning the Summer after Year 3
- First internships at P-TECH Brooklyn: Summer 2014
  - 62 eligible students based upon college class taking and participation in workplace learning class
  - 41 internships at IBM
  - 6-8 weeks, M-Th, with Friday seminars at school
  - Projects requiring students to demonstrate technical and workplace skills mastered at P-TECH
- Summer 2015: Internships at P-TECH Brooklyn and Sarah E. Goode STEM Academy (Chicago)
  - IBM to provide 75 across both schools

**Why IBM?**  
We're more than an IT company.  
We're an opportunity company.

## "First in Line" for Jobs

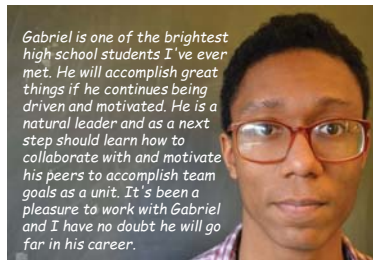
June 2015: Six students graduated with their high school diplomas and AAS degrees

### Profile

- Accelerated through the program in 4 years
- All graduated with AAS in Computer Information Systems

### Next Steps

- IBM interviewed students who were interested in pursuing jobs



*Gabriel is one of the brightest high school students I've ever met. He will accomplish great things if he continues being driven and motivated. He is a natural leader and as a next step should learn how to collaborate with and motivate his peers to accomplish team goals as a unit. It's been a pleasure to work with Gabriel and I have no doubt he will go far in his career.*

## The Playbook: P-TECH 9-14 School Model

- [www.ptech.org](http://www.ptech.org)
- Implement with quality and fidelity
- No need to reinvent the wheel
- Share best practices
- Highlight exemplary efforts

**P-TECH is transforming lives.**

"When people come together and say, 'students deserve a quality educational opportunity, this is the result of that... This is what educational reform looks like.'"

— Karen Amulet,  
Director of Norwich Early College Academy (NECA)

"My experience has made me want to be an engineer more than ever. It's not just to be an engineer, but to be the person who creates the equipment, makes even more equipment."

— Spencer,  
Student at P-TECH Brooklyn

P-TECH 9-14 Schools

## National recognition



**"This country should be doing everything in its power to give more kids the chance to go to schools like this one."**

— President Barack Obama at P-TECH (October 25, 2013)

- Major media: *Time Magazine*; *Wall Street Journal*; *The New York Times*, *PBS NewsHour*



- Perkins Reauthorization: P-TECH as a model

## Career Forward Taskforce Meeting Notes

Meeting: March 24, 2016

### Introductions and Welcome by Commissioner of Education Candice McQueen

- Round robin introductions from the task force members.
- Charge of the task force: examine and explore ways to better engage students in their academic preparations, personal and social development, and workforce readiness; and identify overarching principals leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.
- The three questions the task force will be working to answer are:
  1. How do we know when a student is “career ready” at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
  2. How do we ensure that students are progressing along a directed learning pathway aligned with the state’s economic needs and employer needs at the secondary and postsecondary levels?
  3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?
- Overview of the Tennessee Department of Education’s [TN Succeeds Goal](#). Two of the goals fall directly within the work of the Career Forward task force:
  1. Tennessee will have an average public ACT composite score of 21 by 2020.
  2. The class of 2020 will be on track to achieve 55 percent postsecondary completion in six years.

### Overview of the current Tennessee landscape by Assistant Commissioner, Danielle Mezera

- As a state we have seen many successes in education recently including being the fastest improving state on NAEP, fastest growing graduation rate, consistently showing gains on TCAP, and consistently increasing ACT over the past 3 years.
- We have also experienced success in business with accolades such as #1 overall infrastructure and global development, and #2 best business climate.
- The Governor’s workforce subcommittee has recommended that Tennessee promote a state-specific definition of postsecondary and workforce readiness that is reflective of a collaborative cross agency approach leading to the development of seamless academic-career pathways to the benefit of its citizenry and industries.
  - That recommendation is being actualized through the creation of this Career Forward task force.
- Although we have seen successes as a state there have been headwinds that highlight the continued room for growth.

- Although Tennessee has a high school graduate percentage that is higher than other SREB states and the national average, it lags behind in the number of citizens with some college, no degree, associate, bachelor, and graduate professional degrees.
- ACT composite and benchmark scores have held relatively stagnant since 2011. ACT benchmark scores are the scores a student would need to score in order to have a 50 percent likelihood of scoring a B in a first year credit bearing course.
- As a state we have been tracking students longitudinally. Only 56 percent of students in the 2008 cohort (2012 graduates) enrolled in postsecondary and of those students only 6 percent of students who were enrolled after 1 year completed a degree or certificate within two years.
  - We have a mismatch in readiness.
- Tennessee ranks 36<sup>th</sup> nationally in its per capita income with a per capita income of \$40,457 in 2014.
- Tennessee is not projected to have reached the national average for job-to-postsecondary attainment of 59 percent by 2020, when it was the national average in 2010.
- STEM is a rapidly growing area of job opportunities across the state but postsecondary attainment rates are not keeping pace with the demand.
  - One in five students decide to enter the STEM careers in middle school or earlier. This is a unique opportunity for us to think about how to improve career exploration in the earlier grades.

### **Overview of the Broader Challenge by Assistant Commissioner Danielle Mezera**

- Half of all Americans reach their mid-20s without the skills or credentials necessary for success in today's economy
- Surveys revealed that students and postsecondary faculty, and postsecondary faculty and business leaders have a mismatch in their perceived understanding of "readiness." For example, 89 percent of high school teachers believe their students are ready for postsecondary and only 26 percent of postsecondary faculty believe incoming freshman are ready.
  - The same mismatch exposes itself in understanding of "preparedness." For example, 4 percent of business decision makers define preparedness as being prepared in general compared to 19 percent of high school students.

### **Call to Action Tennessee's Opportunities by Assistant Commissioner Danielle Mezera**

- The state of Tennessee is advancing in term of its workforce requirements and we have a unique opportunity to work within education to support workforce development.

### Group Discussion

Discussion on the differences between preparedness and readiness:

Group 1	Group 2
<p><b>Preparedness</b> is being able to check all the boxes such as ACT score, high school graduation, and cognitive awareness of the academic subjects such as English and math.</p> <p><b>Readiness</b> is the non-cognitive skills and awareness of opportunities. Readiness is being able to take ownership of human capital and skill development, and being able to vocalize “why is this important?” Readiness is having a growth mindset, desire to learn, and valuing skills. Readiness involves experience based-learning and knowing the dynamics of teams.</p>	<p><b>Preparedness</b> is checking all the boxes including fluency and common sense, where students have a minimum level of education. On paper Catherine looked prepared with her 4.0 GPA but having not taken the most rigorous of courses when she got to Vanderbilt she found she was not “ready” and often had to teach herself study skills.</p> <p><b>Readiness</b> is being able to adapt and figure out the answer if you don’t know where it is. Work-based learning helps students to build their readiness skills. Teachers as nurturers can unintentionally hamper readiness as they don’t let student struggle. The business community is more likely to value readiness over preparedness, but need both.</p>
Group 3	Group 4
<p><b>Preparedness</b> is the ability to learn, reading, and problem solving skills. Postsecondary helps to prepare students.</p> <p><b>Readiness</b> is having a certification such as WorkKeys, a strong work ethic, and being able to be on time and show up every day. Readiness is the application of skills.</p>	<p><b>Readiness</b> is the work ethic, the ability to teach yourself to learn, having work ethic, pride, desire to learn, adaptability and problem solving, and having a growth based mindset. Readiness is cultivated through work-based learning and bringing education and workforce together. Career awareness is lacking in early grades which is impacting students’ readiness.</p>

### Juxtaposition of Education and Industry National and Global Perspectives and Models

#### Presentation by Robert Schwartz, Harvard Graduate School of Education

- Tennessee was one of the first states to sign on to participate in the Pathways to Prosperity.
- The report was building on previous work such as *The Forgotten Half; Non College Youth in America*. As a county we spend \$10 per student in a public college and only \$1 on those not in school.
- Students know that they should go to college, in a survey 90 percent of students said that they are going to college but then only 70 percent enroll in some form of postsecondary and only 50 percent by their mid-twenties have a postsecondary credential.
- In the 1960’s the U.S. led the world in terms of it high school graduation rate but has since been pretty stagnant in growth, whereas other countries are catching up and advancing ahead of us. In the 1990s the U.S. ranked 13 in graduation rate. The U.S. is ranked 11<sup>th</sup> in degree attainment among young adults, ages 25-34, compared to other developed countries.

- We are one of the few countries that has the category “some college.” “Some college” represents debt and lost opportunity cost.
- The U.S. is also struggling with the challenge that students with a bachelor’s of arts are often unemployed or underemployed. We are not spending enough time helping students to think about themselves in the world and how their strengths align. We need to work on helping students see the intersection of their strengths and the available jobs.
- Colleges are not helping prepare students in the way that they should. There was a study *Academically Adrift* that interviewed 3,200 students and had them take the collegiate learning assessment of core intellectual skills as an incoming freshmen, sophomores, and seniors. Thirty-five percent of students saw no improvement on their senior year. Students are drifting into postsecondary without thinking about why.
- Seventy percent of jobs in 2020 will need a degree, but 35 percent will be an associates. Having a higher degree doesn’t necessarily mean more money, your skill alignment to the labor market matters more. Forty-three percent of young workers with licenses and certificates earn more than those with an associate’s degree.
- STEM jobs are increasing rapidly and not only for those with a bachelor’s degree. Fifty percent of STEM jobs do not require a bachelor’s degree.
- As a county we are struggling with youth unemployment. Globally countries with stronger vocational programs have the lowest youth unemployment. Switzerland has done an excellent job of stopping youth unemployment. Employers are a part of the education conversation and the postsecondary system is set up so there are no dead ends. Switzerland routinely is at the top of the education competitiveness rankings.
  - The Swiss system makes sure to combine theory with practice at a host company while students are still in K-12 schools.
- The Pathways Network is expanding across the U.S.
  - The goal is to have students complete high school with at least 12 college credits and WBL experience, attain a postsecondary credential with value in the labor market, launch a career in a high demand, high wage occupation, and advance in career and pursue further education as interested.
  - Early colleges are one way to help support this goal. Early colleges help low income and students of color increase graduation rates, college enrollment, and degree attainment. Texas and North Carolina have strong early college programs.
- Currently in the U.S. 5.5 million youth ages 16-24 are not in school or employed.
- The policy levels to help change youth unemployment are:
  - Early career counseling
  - Engage employers in work-based learning
  - Support intermediary links between education and employers- help to take the logistics off of the employer. For example, the private industry council in Boston.
  - Committed state leaders and a favorable policy environment
- Tax incentives are used in North Carolina but monetary incentives are not necessarily the solution. Students have to see a future for themselves and have the supports to get there.

## **P-Tech Grades 9-14 School Model by Maura Banta, Corporate Citizenship & Corporate Affairs at IBM Corporation**

- The P-Tech model started with a partnership between Brooklyn High school, CUNY, and IBM. Now other businesses are beginning to replicate the model.
- IBM first started with the idea as they had jobs that couldn't be filled locally and a lack of diversity in the workforce.
- P-Tech has a focus on STEM fields and Career and Technical Education and the goal is to create, "the pathway from classroom to career to a stronger economy."
- By sophomore year of high school all students take a college bearing course.
- The requirements of the model are:
  - Systemic partnership between K-12, higher education, and industry
  - The public school must be open to all students
  - Six year scope and sequence for all students to obtain an AAS degree
  - Work-based learning opportunities
  - The ability of students to work at their own pace
  - A steering committee
  - Mentoring
- There are currently 30 P-Tech schools in New York. The commitment to expanding the schools came from the Governor, an important element to have to ensure the success of the schools.
- Six students have graduated from high school with an AAS and three went onto 4 year universities and 3 went directly to work for IBM.
- The industry partnership is an integral part of the program. All students get paid internships, skills mapping, work-based learning curriculum, and mentors. Students are first in line for jobs at the business partner but are not guaranteed a position.

Answers to questions from the task force:

- Barriers to the system of P-Tech schools include:
  - Allowing students to be in high school for six years results in challenges with funding and discussion of the role of higher education.
- The P-Tech schools are a mix of converted and new.
- Special education is a small percent of the student body but are often part of the 10 percent of students who won't graduate in 6 years with an AAS.
- Tennessee barriers include:
  - Lottery money is not available for high school students.
  - It is a challenge to get it all in with the state graduation requirements.
  - Competency-based education could be built up in Tennessee.
- Some students do struggle with the course load but their favorite and most challenging part is being a high school student taking college level coursework is that they are a high school student taking college level coursework.



## **Fireside Chat facilitated by Assistant Commissioner, Danielle Mezera between Robert Schwartz and Maura Banta**

How did the Massachusetts's task force to address career readiness come about?

- The goal was a desire to define college and career readiness.
- CTE was stagnant in the 1980s and felt that it was exempt from the standards movement but as a state Massachusetts was slowly shifting the tide and CTE was becoming more and more rigorous.
- The task force's first iteration was an accountability board that was eventually abolished and became the task force to address career readiness. It was a 32 person committee including members of K-12, higher education, and industry. The goal was to discuss how to better integrate college and career readiness into K-12 education and come up with a definition of college and career readiness.
- The changing tides of assessments and standards also helped with the creation of the task force and having business involved helped to give the task force more credibility.

Why did the task force come about?

- All the other reform initiatives such as assessments and charter schools had captivated the attention of the K-12 board. There needed to be a clear sense of what it means to be college and career ready.
- Employers were saying that students didn't have the necessary skills.
- Massachusetts is number 1 on NAEP and PISA, and as a state had gotten complacent.
- They wanted to light a fire under the comprehensive high schools to shed more light on vocational programs, and give students direction and choice.
- The number of students requiring remediation also contributed.

How did you get these recommendations from policy to practice?

- The setting of goals was very important. The goal was to have 70 percent CTE awareness and emersion through paid internships. There were also goals around the number of students, companies, and schools participating.
- They created the data dashboard to track student's progress and improve longitudinal data.
- Massachusetts joined pathways in three regions to connect the community college, school district, and workforce board. The challenge after this was moving from regional changes to statewide changes. Here in Tennessee we already have an advantage as the governor is supportive.
- Through Clinton's School to Work Authorization ACT, Massachusetts put in a recurring line item in the budget for connecting opportunities. Through the workforce development board it pays for work-based learning for approximately 10,000 students.
- Massachusetts has the house chair support which was very important.
- Now they are thinking about how to diversity their approach to improve accountability and sustainability.

- A challenge has been to ensure that there are enough counselors to help students in the schools, but the continued role of business groups has been very important.
- Having multiple boards involved was important such as the statewide STEM council.

What advice can you impart to us?

- Consider how far does the governor's reach extend?
- Tennessee is already a role model, what do we think are the best practices?
- Successful completion of college level work is the best predictor of postsecondary attainment.
- We should look into the early college model, and it's even better if the early college is located on a college campus.
- Consider the idea that having both college and career readiness is an oxymoron if the focus is on careers requiring postsecondary. What surrogate word could you come up with for career?
- All students should have work experiences. Is there a way to have a certified assessment from an employer that a student could graduate with?

### Group Discussion

Discussion on skills versus competencies:

Group 1	Group 2
<p>There are many similarities in the discussion of skills versus competencies from preparedness and readiness. In competencies how it is framed matters to students. You use skills to build competencies. Credentials can be signal of competencies or skills. For example a CNA is a signal of competencies and a Microsoft office certificate is a signal of skill. We need to discuss what does a high school diploma mean? Does it signal skills or competencies? What should it signal?</p>	<p>Skills are checking isolated boxes and competences are bringing it all together. The skills are what our standards are measuring. Students can build competences through work-based learning and employment experiences. There is also an attitude and maturity piece involved in competencies. With high school students are we pushing them too far developmentally? We need to provide students with the opportunity to develop maturity. What are other countries doing to help build maturity?</p>
Group 3	Group 4
<p>Businesses are looking for the knowledge, skills, and abilities. Education has a role to help build those skills. Ability defines competency for a company. How do we develop competency if ability is the missing piece? Work-based learning is an important element to help tie skills together to help them become the competencies.</p>	<p>Two words that repeatedly came up in the discussion were value and contribute. Skills are building blocks to competencies that build the value for a company. Businesses need to connect skills with practice opportunities in order to help build competencies, therefore helping to develop value within their own companies.</p>



### **Closing Remarks from the Commissioner of Education, Candice McQueen**

Thank you to everyone for attending. We are in a very unique time with the passage of the Every Student Succeeds Act. We look forward to future meetings and the rich discussions that we will continue to have.



To: Members of the Career Forward Taskforce

From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education

Date: March 30, 2016

**Subject: Follow-up from meeting on March 24, 2016**

### **Meeting Overview**

The first meeting of the Career Forward Task Force was held on March 24, 2016, at the First Amendment Center in Nashville, Tennessee. The purpose of the meeting was to (1) frame the reasons for the development of the task force and its charge; (2) discuss the current Tennessee education and workforce landscape; (3) examine the work of Robert Schwartz on the Pathways to Prosperity report; (4) understand the IBM system of P-Tech schools; (5) learn from Massachusetts' task force to address career readiness, and (6) begin discussions of the definition of preparedness, readiness, skills, and competencies.

The meeting began with opening remarks from Commissioner Candice McQueen and round-robin introductions from the group. Commissioner McQueen charged the taskforce to "examine and explore ways to better engage students in their academic preparations, personal and social development, and workforce readiness; and identify overarching principals leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education."

Commissioner McQueen outlined that the question the task force will be working to answer are:

1. How do we know when a student is "career ready" at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state's economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

### **Tennessee Landscape and the Broader Challenge**

Danielle Mezera, assistant commissioner of college, career and technical education, provided an overview of the current Tennessee landscape. As a state we have seen major progress in areas such as our graduation rate, improvement on NAEP and TCAP, and business accolades. The progress, however, has also experienced headwinds with Tennessee lagging behind the national average in postsecondary attainment and ACT benchmark growth. Tennessee currently ranks 36<sup>th</sup> nationally with an average per capita income of \$40,457 in 2014. As a state our postsecondary attainment is not currently increasing to match the projected workforce needs, especially in the area of STEM.

Nationwide the results highlight that there is a mismatch between the preparedness and readiness of students, and the expectations of the postsecondary and business institutions. Half of Americans reach their mid-twenties without the skills or credentials necessary for success in today's economy.



The goal of this task force is to help work within education to help support workforce development by partnering with higher education and business.

### **Preparedness versus Readiness Discussion**

Members of the task force we asked to assemble into groups to discuss the differences in the definitions of preparedness versus readiness. Across the groups preparedness was defined as the ability to “check all the boxes” such as freshman English and taking the ACT, but that preparedness was not synonymous with readiness. Readiness was described as the non-cognitive skills such as taking ownership, knowing why something was important, adapting, work ethic, and the application of skills.

### **Presentation on *Juxtaposition of Education and Industry National and Global Perspectives and Models Presentation***

Robert Schwartz, Professor Emeritus of Practice in Education Policy and Administration at Harvard Graduate School of Education and co-leader on the Pathways to Prosperity Network presented results from his work. Dr. Schwartz continued on the message began by Dr. Mezera that there is a mismatch in student readiness mentioning that 90 percent of students state that they are going to postsecondary but only 70 percent enroll in postsecondary, and only 50 percent attain a credential. The U.S. has been struggling with graduation rates and postsecondary attainment, especially in comparison to other developed countries; our growth has stagnated.

Dr. Schwartz discussed additional challenges that the U.S. is facing including: (1) underemployment or unemployment of students with a bachelor’s degree, (2) postsecondary institutions not helping to prepare students for careers, (3) youth unemployment, (4) lack of growth in STEM certifications, and (5) students lack of knowledge of why they are obtaining a degree. The Swiss are helping to ameliorate some of these challenges by prioritizing vocational education and making sure that businesses are an integral part of education. As a state we should consider the expansion of the Pathways network to help guide students into postsecondary opportunities and careers that align with workforce needs and expanding early college schools.

Tennessee can leverage early career counseling, employer involvement in work-based learning, links between education and employers, and the commitment of state leaders to work help increase postsecondary attainment.

### **Presentation on P-Tech Schools**

Maura Banta, IBM Director of Citizenship Initiatives in Education, presented on the P-Tech model. P-Tech schools are innovative grade 9 to 14 public schools that create clear pathways from high school to college and career by partnering a high school, postsecondary intuition, and industry. P-Tech schools came into existence as IBM realized that they had jobs that couldn’t be locally filled and a lack of diversity in their workforce.

The P-Tech model provides supports for students so that they can graduate from high school in six years with an associate’s degree. All students are expected to take a college credit bearing course their sophomore year. Students attending P-Tech schools are provided work-based learning experiences, an internship, a mentor, skills mapping, a competency-based education, and the



potential to work for the industry partner. The P-Tech model has expanded in New York thanks to support of the governor and is now expanding nationwide. The P-Tech system is working to support their youth but faces challenges when thinking through funding and how to keep momentum going in the schools. Task force member discussed the barriers to opening a P-Tech school in Tennessee which included challenges such as lottery money being unavailable to high school students, and the challenge of fitting in college credits and state high school graduation requirements.

### **Fireside Chat between Robert Schwartz and Maura Banta**

Danielle Mezera facilitated the fireside chat discussion on Massachusetts's task force to address career readiness. Robert Schwartz and Maura Banta had both been members of the task force asked to develop a statewide definition of college and career readiness. The 32 person committee was founded in response to the standards movement, disconnect between Career and Technical Education and comprehensive schools, and remediation numbers of incoming postsecondary freshman. Maura Banta shared that goal setting was a very important element of the task force as the goals combined with a data dashboard helped to shift the discussion from policy to practice. Robert Schwartz and Maura Banta suggested that we consider leveraging the governor's role, the early college model, and using our already strong experiences.

### **Skill versus Competencies Discussion**

Task force members rejoined their groups to discuss the definitions of skills versus competencies. Across the groups there was agreement that skills are combined together to form competencies. Skills are the incremental elements that students learn in school and then are combined together to become competencies through experiences such as work-based learning or employment.

### **Next Meeting Information**

We will meet again Friday, April 22 at the First Amendment Center to continue our discussion on postsecondary and career readiness. For additional information on the meeting please see the attached meeting notes document.

Thank you for your participation in the March meeting of the Career Forward Task Force. Please feel free to contact [Melissa.Canney@tn.gov](mailto:Melissa.Canney@tn.gov) with any questions you may have.

### **Contact Information**

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2. Jerry Boyd	Director	Putnam County Schools
3. Rep. Harry Brooks	Chairman	TN General Assembly
4. Dr. Celeste Carruthers	Asst Professor	UT-Knoxville
5. Tony Cates	HR Manager	Gestamp
6. Dr. Russ Deaton	Executive Director	TN Higher Education Commission
7. Dr. Tristan Denley	V.C. for Academic Affairs	TN Board of Regents
8. Catherine English	Student	Metro Nashville/Vanderbilt University
9. Susan Farris	CTE Director	Lauderdale County Schools
10. John Faulconer	Principal	Knox County Schools
11. Rep. John Forgety	Chairman	TN General Assembly
12. Jeff Frazier	Director	Eastman Chemical/RCAM
13. Coral Getino	Parent	
14. Jade Grieve	Senior Director	America Achieves
15. Dr. Sara Heyburn	Executive Director	TN State Board of Ed
16. James King	V.C. for TCAT	TN Board of Regents
17. Stacey Kizer	IT Teacher	Williamson County Schools
18. Mike Krause	Executive Director	TN Promise and Drive to 55
19. Becca Leech	America Achieves Fellow	Warren County Schools
20. Kristina McClure	Parent	
21. Dr. Kristen McGraner	STEM Prep Academy	Metro Nashville Public Schools
22. Dr. Candice McQueen	Commissioner	TN Dept of Education
23. Dr. Danielle Mezera	Asst Commissioner	TN Dept of Education
24. Sen. Mark Norris	Senate Majority Leader	TN General Assembly
25. Suzanne Payne	Dir. Corp Responsibility	Unum
26. Burns Phillips	Commissioner	TN Dept of Labor & Workforce Dev
27. Eddie Pruett	Director	Gibson County SSD
28. Arlette Robinson	CTE Director	Bradley County Schools
29. Debbie Shedden	School Board Member	Hawkins County/TSBA President
30. Kyle Southern	Dir. Policy & Research	SCORE
31. Ted Townsend	Chief of Staff	TN Dept of Econ & Community Dev
32. Cal Wray	Executive Director	Clarksville-Montgomery County EDC

**Group 1**

Jerry Boyd  
Rep. Forgety  
Jeff Frazier  
Arlette Robinson  
Jade Grieve  
Russ Deaton  
Celeste Carruthers  
Candice McQueen  
Kyle Southern

**Group 2**

Eddie Pruett  
Sen. Norris  
Cal Wrey  
Susan Farris  
Kristen McGraner  
Tristan Denley  
Becca Leech  
Catherine English  
Bobby Sanborn

**Group 3**

Ted Townsend  
Mike Krause  
Tony Cates  
Stacey Kizer  
Kristina McClure  
James King  
Debbie Shedden  
Casey Wrenn  
Laura Moore

**Group 4**

Rep. Brooks  
Suzanne Payne  
Missy Blissard  
John Faulconer  
Burns Phillips  
Coral Getino  
Sara Heyburn  
Danielle Mezera  
Chelsea Parker



# THE CHALLENGE

Education and training systems around the world are failing the most economically vulnerable young people. As economies have evolved to require a more skilled workforce, young workers need education or training beyond high school in order to find well-paying jobs that enable them to join the middle class. Without opportunities to gain early work experience, develop skills and obtain meaningful postsecondary credentials, the number of young adults who are disconnected from the workforce will continue to grow.

## HIGH SCHOOL GRADUATION

Non-graduates earned a median annual wage of about \$24,000...

...compared with about \$42,000 for graduates.<sup>1</sup>

## POST-SECONDARY EDUCATION OR TRAINING

Nearly all high school seniors intend to graduate from a four-year college...  
...but only half go on to do so.<sup>4</sup>

One of the most common reasons students fail to complete their study is that they need to start earning a living or supporting their family immediately.<sup>5</sup>

While the overall U.S. high school graduation rate reached an all-time high of 82% in 2014<sup>6</sup>, only about 60% of students in high-poverty urban districts graduate.<sup>7</sup> Workers who don't graduate from high school face dwindling job prospects, lower wages and fewer opportunities to join the middle class.

## NEITHER WORKING NOR IN SCHOOL

5.5 million people age 16 to 24,<sup>9</sup>

22% of black young adults,<sup>10</sup>

1 in 5 Latino young people in 10 U.S. metro areas.<sup>11</sup>

Young people who are disconnected from school and work go on to earn lower wages when they do find work, pay fewer taxes and rely on social services more than their at-work or in-school peers.<sup>12</sup>

## SKILLED WORKFORCE

About one-third of American companies report having openings for which they cannot find qualified workers.<sup>3</sup> Failing to prepare young people with the right skills and education for these jobs is not just a missed opportunity for youth, it is a missed opportunity for businesses to hire the talent they need to grow and compete.

Just over half the population has a meaningful postsecondary credential...  
...one that will allow them to compete for a well-paying job at age 25.<sup>8</sup>

By their mid-20s, only 32% of young Americans have graduated from a four-year institution, 10% have obtained a degree from a two-year college and about 10% have acquired a recognized occupational certificate.<sup>7</sup>

Recent education reform efforts have made progress raising academic standards to increase college readiness. However, without a similar focused effort to equip youth with the knowledge, skills, personal attributes and work experience required to be career-ready, young people will continue to lack the preparation to succeed in an increasingly skilled workforce.

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  - 8 Manpower Group. (2015). "2015 Talent Shortage Survey." Retrieved from: <http://www.manpowergroup.com/wps/wcm/connect/manpowergroup-en/home/thought-leadership/research-insights/talent-shortage-2015/talent+shortage+results>.
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  - 11 *Ibid.*
  - 12 Sarah Ayres. (2013). "The High Cost of Youth Unemployment." Center for American Progress. Retrieved from: <https://www.americanprogress.org/issues/labor/report/2013/04/05/59428/the-high-cost-of-youth-unemployment/>.
- Disclosure: Author is currently employed by JPMorgan Chase.

# Tenn. study: Half of all jobs could be replaced by automation

By [Chambers Williams](#) of the Knoxville News Sentinel  
March 20, 2016

A gloomy report on the future job market in Tennessee, released this past week by the state, suggests that up to 1.4 million people, or half of all current workers, are susceptible to losing their jobs to automation.

Called the "Tennessee Workforce Disruption Index," the report details findings of a study by the Center for Economic Research in Tennessee, which is part of the state's Department of Economic and Community Development.

The department's commissioner, longtime Knoxville businessman and entrepreneur Randy Boyd, called the study "a seminal piece of work." "It's pretty important information, and it would be very scary if we didn't have a solution," Boyd said.

But as dire as the report makes the situation sound, such a massive loss of jobs could be avoided by shifting educational resources toward training workers for the new career opportunities that such automation would necessarily create, he said.

"The solution is our 'Drive to 55' initiative, whose goal is to raise post-secondary educational attainment" in Tennessee from the current 37 percent of the population to at least 55 percent, Boyd said.

"The people who are at risk don't have post-secondary skills," he said. "Drive to 55 is already addressing that. The bad news is that if we do nothing, 1.4 million people — or 50 percent of our workforce — could lose their jobs.

"But if we succeed, not only will there be jobs, but those jobs will create additional income — \$9.3 billion annually. So if we fail, it's cataclysmic. If we succeed, it's glorious."

According to the report, automation doesn't eliminate the need for labor; it changes the way the workplace is configured, and makes new demands on educational facilities on how the workforce should be trained.

"History demonstrates that a shift toward heightened technological demands of the business community does not likely coincide with declining demand for labor," reads the report.

"Automation of workplace tasks will displace workers, but not replace workers.

"Rather than eliminating labor, automation is likely to reshape the distribution of jobs. New jobs will be created and individuals will shift toward existing jobs requiring the unique abilities, knowledge and high-level skills that our future workforce will demand."

In Knoxville, that shift in education is underway, with industrial maintenance and mechatronics programs already training students at the Tennessee College of Applied Technology for jobs that are in high demand, said the school's assistant director, Kasey Vatter.

Tuition is free for qualifying students under the Tennessee Promise program, which applies to recent high school graduates and adults seeking career training, she said.

"These programs in the past two years have had an average student age of 27 or older, but that's shifting younger with Tennessee Promise, which is attracting college-age kids," she said.

"But the programs also attract a lot of older people who are retraining for new careers."

Among those older students in the industrial maintenance program at the school on Liberty Avenue is Brad Wieger, 45, of Clinton. Unemployed for now, he said he had worked in maintenance for more than 15 years, but found himself falling behind with new technology coming into the workplace.

"I realized I needed more skills to get a better job or even keep a job," he said. "I have maintenance experience, but I need the PLC (Programmable Logic Controller) training that companies are now requiring."

PLCs are at the core of much of today's automated equipment in the workplace, and learning how to program and troubleshoot PLC circuits is necessary for most of today's advanced industrial equipment, said Mike Gallimore, the lead instructor for the industrial maintenance programs at TCAT-Knoxville.

"It's a 16-month program, involving basic maintenance, basic electricity, PLCs and minor robotics," said Gallimore, who worked for Denso Corp. in Maryville for 21 years before turning to teaching.

"We start them with the basics, and work them through the more complicated subjects," he said.

"But when they're finished, the job opportunities are waiting for them. And these graduates are in great demand. Along the I-75 corridor, there are 15 jobs waiting for each qualified applicant."

Starting pay beats a lot of entry-level jobs that workers with little or no education beyond high school would be able to fill, Gallimore said.

"People leaving our program see typical starting pay of \$18-\$20 an hour," he said. "And we can't turn these students out fast enough. The jobs and opportunities are out there, they just need the training. About 53,000 jobs became available nationwide in industrial maintenance last year, but there were only 13,000 people trained to take those jobs."

J.T. Roberts, 18, of Townsend is one of Gallimore's students. He started the program in September.

Although he already has a job at Denso, Townsend is taking the classes "to further my career in industrial management and get a higher-paying position either at Denso or somewhere else," he said. "It's very interesting work, and there are plenty of maintenance jobs out there."

Matt Nauman, 20, of Karnes will finish the program in April, and already has prospects for a good job, he said. "I'm getting a great education, with lots of hands-on work, and when I'm finished, there are lots of jobs available," he said.

There also are students sent to the school by their employers to get additional training under an arrangement TCAT has with several area manufacturers, Gallimore said.

"I have four students from Eagle Bend Manufacturing in Clinton who were selected by their company to transition from production to maintenance," he said. "They're learning welding, machine tooling and other skills. And Eagle Bend guarantees them higher-paying maintenance positions when they complete their training."

Six evening students from Knoxville's Gerdau Steel are learning PLCs and basic electrical systems at the school so they can be maintenance technicians at that company, he said.

Boyd said the state's educational facilities, especially those geared toward career training, are focused on getting students ready for real careers that will be relevant to the future. Collaboration between educators and industry is the key to matching students with real jobs, he added.

"It's all about finding what industry needs," he said. "I remind my business partners that we have to be engaged in education. We can't just be cheerleaders. We have to visit the employers, and the employers must visit the schools."

Part of the process involves getting kids interested in technology careers as early as middle school, Boyd said. There are programs in middle and high schools that point students toward these careers and get them started on their training.

Sometimes it's a hard sell, though, Boyd said.

"We're trying market research to find out what is keeping young people from going to these programs," he said. "Are their parents discouraging them? We're doing some advertising to promote these jobs and raise awareness with students and parents that these are opportunities they need to take advantage of.

"We have done this to ourselves, with parents showing their kids pictures of people working in (old-style) factories, telling them, 'If you don't go to school, this is where you'll end up.' A big part of it is communication."

Today's factories aren't like that, Boyd said. They're modern workplaces with state-of-the-art robotics and automation.

The good news for Knox County is that it is 93rd lowest on the list of Tennessee's 95 counties for the potential loss of jobs to automation, according to the report. "Here, we already have a highly educated workforce, thanks to TVA, Oak Ridge and UT," he said. "People with post-secondary success usually have children who do, too.

"But outside of Knox, we're surrounded by counties that are distressed. Twenty-one of the state's counties are distressed, and a bunch of those are just north of us, with a whole section in the bottom 10 percent of the entire country."

Those include Campbell and Claiborne counties. Loudon and Sevier also rank high on the list of counties with high potential for job interruption, according to the report.

"Rural counties are more vulnerable to the disruptive effects of automation," the report notes.

"Of Tennessee's 17 urban counties, only three — Hamblen, Loudon, and Bradley — are ranked in the most vulnerable two-thirds of Tennessee counties."

"The solution for them is education," Boyd said, especially the technical schools, where students "don't have to have as much academic preparedness. "The career training the tech schools offer is "cheaper, quicker, and in high demand," he said.

"The biggest challenge is to let people know this is the place to go," he said. "All of it is free now, so there is no excuse not to take advantage of it." Yet he acknowledges that there might not be enough programs to handle those looking to take advantage of the opportunities available. "In some cases, in certain fields and schools, there are waiting lists," Boyd said. "That's something we have to fix."

#### KEY FINDINGS:

- 1.4 million Tennessee jobs have a high probability (70 percent or higher) of replacement by automation. This represents 50 percent of Tennessee's current workforce. Vulnerable jobs as a share of total employment range from 35.7 percent in Bledsoe County to 59.6 percent in Sevier County.
- Lower-wage occupations are more vulnerable to replacement by automation. The average hourly wage of jobs with a 70 percent probability of automation is \$14.56, which is \$5 lower than the state's current average hourly wage for all jobs.
- If automation occurred in the occupations with at least a 70 percent probability of automation, 37 percent of the wages of workers in Tennessee could be lost.
- Rural counties are more vulnerable to the disruptive effects of automation. Of Tennessee's 17 urban counties, only Hamblen, Loudon, and Bradley are ranked in the most vulnerable two-thirds of Tennessee counties.
- Tennessee regions most vulnerable to future workforce disruption are Northwest Tennessee and the Upper Cumberland. The Northern Middle and Greater Memphis regions are least vulnerable.
- Within the Southeast states, Tennessee is ninth-most vulnerable to future workforce disruption, where a rank of one represents high vulnerability and a rank of 12 represents low vulnerability. Virginia is the least vulnerable state (12); Mississippi is the most vulnerable.

**Robert Schwartz**

Robert Schwartz is Professor Emeritus of Practice in Educational Policy and Administration. He held a wide variety of leadership positions in education and government before joining the HGSE faculty in 1996. From 1997 to 2002, Schwartz also served as president of Achieve, Inc., an independent, bipartisan, nonprofit organization created by governors and corporate leaders to help states improve their schools.

From 1990 to 1996, Schwartz directed the education grant making program of The Pew Charitable Trusts, one of the nation's largest private philanthropies. In addition to his work at HGSE, Achieve, and The Pew Charitable Trusts, Schwartz has been a high school English teacher and principal; an education adviser to the mayor of Boston and the governor of Massachusetts; an assistant director of the National Institute of Education; a special assistant to the president of the University of Massachusetts; and executive director of The Boston Compact, a public-private partnership designed to improve access to higher education and employment for urban high school graduates.

Schwartz has written and spoken widely on topics such as standards-based reform, public-private partnerships, and the transition from high school to adulthood. In recent years Schwartz has contributed to three volumes published by Harvard Education Press: *Teaching Talent* (2010), *Surpassing Shanghai* (2011), and *The Futures of School Reform* (2012). He currently co-leads the Pathways to Prosperity Network, a collaboration among a group of states, HGSE, and Jobs for the Future designed to ensure that more young people graduate high school, attain an initial postsecondary degree or credential with value in the labor market, and get launched on a career while leaving open the possibility of further education.

**Maura O Banta**

Maura O. Banta is IBM's Director of Citizenship Initiatives in Education. She joined IBM in 1973 as a marketing representative and held positions in Sales, Insurance Industry Consulting and Marketing Management before joining the Corporate Citizenship Department.

In 2006 Maura was named Eastern Regional Manager for IBM's corporate philanthropy, government relations and community relations. She assumed her current role in 2012.

Ms. Banta is a board member of the Massachusetts Taxpayers Foundation, the Boston Plan for Excellence, The Rennie Center for Education Research and Policy, and The Carroll School of Management at Boston College. Maura is a former chair of the board of the Mass Business Alliance for Education. She served for 6 years on The Massachusetts Educational Management and Audit Council under both Governor Swift and Governor Romney. Maura chaired the Massachusetts Board of Elementary and Secondary Education from 2008-2014 under an appointment by Governor Patrick. In 2014 Governor Patrick appointed Maura to the Board of Higher Education.



## **P-TECH 9-14 SCHOOL MODEL**

P-TECH schools are innovative grade 9 to 14 public schools that create clear pathways from high school to college and career for young people from all academic backgrounds. P-TECH students are not pre-screened for admission. In six years or less, they graduate with a high school diploma and a no-cost, two-year associate degree in a growth industry field. Each P-TECH school works with a corporate partner and a local community college to ensure an up-to-date curriculum that is academically rigorous and economically relevant. Hallmarks of the program include one-on-one mentoring, workplace visits and skills instruction, paid summer internships and first-in-line consideration for job openings with a school's partnering company.

P-TECH graduates are fully prepared to begin middle-class careers in the 21<sup>st</sup> century workplace, continue their educations at the four-year college and university level and beyond, or both. By 2016, the replicable and sustainable P-TECH model will encompass a network of more than 60 schools serving thousands of students in the U.S. and Australia. Together, these schools are spearheading an international effort to reform and revitalize career and technical education (CTE).

### **Why P-TECH Matters**

P-TECH matters because current CTE programs are substantially out of sync with the present and future demands of industry. In the U.S. alone, there are 28 million “middle-skill jobs” – jobs that require an associate degree or similar technical training, but not a four-year degree – with 14 million additional jobs coming online by 2018. The fastest growing and highest paying sectors of the job market are those requiring proficiency in STEM (Science, Technology, Engineering, Mathematics) fields. But fewer than one-third of U.S. students are adequately prepared in STEM.

While U.S. high school graduation rates have improved markedly, postsecondary completion rates and the quality of skills training have not. Forty-three percent of U.S. community college students require remediation, and fewer than 25 percent of them will earn their “two-year degree” within eight years. For low-income Americans and young people of color, the statistics are dramatically worse. What awaits them and others without postsecondary degrees and middle-skills job training are part-time, no benefits jobs paying less than \$15 per hour (with sporadic or seasonal availability), and the life of the working poor.

P-TECH was designed to help break the cycle of poverty and address skills gaps in the labor force by preparing urban, suburban and rural young people from all backgrounds for academic achievement and skilled, middle-class employment. In 2011, working with the New York City Department of Education and The City University of New York, IBM created a program design that would link education to economic development and illuminate a pathway from high school to college and career.

### **9-14 Model Tenets and Featured Components**

P-TECH is distinct from other “early college” model schools in significant ways:

- P-TECH schools are “open admissions,” meaning there is no testing for admission. P-TECH does not “cream” or “cherry pick” its students.
- As part of a scope and sequence connected to an associate degree in an in-demand STEM field, P-TECH students take full-credit college courses beginning in the summer between grades 9 and 10.
- Each P-TECH school is a collaboration among a school district, a community college and a corporate partner to ensure a rigorous curriculum that maps directly to current and future job market needs.
- Each P-TECH student has a mentor, experiences workplace learning embedded in a strong academic

curriculum, and benefits from structured workplace visits and paid internships. Successful graduates are placed first in line for jobs with his or her school's industry partner.

**Focus on Public Schools:** P-TECH schools are public schools, open to all students without admissions testing or cost to them or their families.

**Focus on Early College:** At P-TECH, "college begins in ninth grade." Students take full-credit college courses as early as the summer between ninth and 10<sup>th</sup> grades as part of a six-year scope and sequence of academic and workplace learning. Graduates earn their high school diploma and a two-year associate degree from their school's college partner.

**Focus on Careers:** As collaborative partnerships among school districts, community colleges and employers, P-TECH programs map their academic and workplace skills curricula directly to 21<sup>st</sup> century labor market demands. Program curriculum features include:

- Continually sequenced and updated workplace learning informed by current and future industry standards
- One-on-one matching with adult mentors from each school's partnering company
- Project-based learning activities and experiences, including workplace visits, paid internships and guest speakers from employers

**Focus on Mastery Through Personal Pathways:** Each P-TECH student moves through a personalized academic and career readiness sequence, aligned to college and career requirements. Teachers and advisors closely monitor each student's program and progress based on his or her individual needs and performance. The focus is on mastery, not seat time.

### **A Model for Replication**

The first P-TECH school opened in Brooklyn, New York in September 2011 as a collaboration among the New York City Department of Education, The City University of New York, the New York City College of Technology ("City Tech") and IBM. There are now 40 P-TECH model schools nationwide:

- 31 across New York state
- Four in Connecticut
- Five in Illinois (Chicago)

In 2016, new P-TECH schools will open in Colorado, New York and Rhode Island, and the first global replication of the model will take place in Australia – which will open two new schools.

### **The Playbook: [www.ptech.org](http://www.ptech.org)**

IBM invented P-TECH, and created the P-TECH 9-14 School Model Playbook website ([www.ptech.org](http://www.ptech.org)) to serve as the central hub for public-private partnerships interested in learning about and implementing this groundbreaking school reform model.

The site details elements of the P-TECH model, and provides action-oriented guidance and tools to enable public-private partnerships to implement the model effectively. The guidance includes a series of P-TECH model schools case studies that illustrate the strategies and tactics required for P-TECH partnerships to replicate the model's outstanding results.

## **SNAPSHOTS OF IBM'S FOUR P-TECH SCHOOLS:**

### **PATHWAYS IN TECHNOLOGY EARLY COLLEGE HIGH SCHOOL (P-TECH Brooklyn): Brooklyn, New York**

In June 2015, six young scholars from Brooklyn P-TECH completed requirements for their Associate in Applied Science degree from the New York City College of Technology in their fourth year at the school – two full years ahead of schedule. Three of these graduates have joined IBM full-time: two as associate analysts in market development and one as a digital commerce specialist. The remaining three graduates are continuing their educations at four-year colleges and universities.

#### **Leadership and Staff**

- Founding Principal: Rashid Ferrod Davis
- 29 teachers, 3 assistant principals, 4 guidance counselors, 1 business manager, 4 central office staff, and full-time liaisons from City Tech and IBM

#### **Student Profile**

- 522 total student population
- 74% boys; 26% girls
- 96% Black or Hispanic
- More than 80% of students qualify for free or reduced lunch
- 16% of students have Individualized Education Programs (IEPs)
- Average attendance rate is 90%

#### **Academic Achievements**

- 265 students (over 50%) enrolled in college courses
- 88% of graduates in 2015 met college ready benchmarks—top amongst unselective NYC high schools

To remain in good academic standing at the college, students must meet minimum GPA requirements:

- 66% of students who have attempted 1 – 12 credits are in good academic standing (GPA 1.5+)
- 64% of students who have attempted 13 – 24 credits are in good academic standing (GPA 1.75+)
- 90% of students who have attempted 25+ credits are in good academic standing (GPA 2.0+)

#### **Legacy Cohort (entered 9<sup>th</sup> grade in Fall 2011)**

- 11 students have earned associate in applied science (AAS) degrees in computer information systems
- 15 students are on-track to complete their AAS degrees by June 2016
- 78% of the cohort (76 total students) completed paid internships, most with IBM
- 70 students (72%) have passed at least one college technology class with C or better

#### **Cohort R: entered grade 9 in 2012**

- 11 students on track to earn degree within four years, in June 2016
- 24 students have earned more than a year's worth of college credits (24+)
- 20 students have earned between a semester and a year of college credits (12-24)
- 37 students earned a semester's worth of college credits (12)

#### **Cohort S: entered grade 9 in 2013**

- 17 students have more than a year's worth of college credits (24+)
- 12 students have earned at least a semester's worth of college (12+)
- 21 additional students have some college credits after only 2.5 years of high school

## SARAH E. GOODE STEM ACADEMY: Chicago, Illinois

Launched in September 2012, Sarah E. Goode STEM Academy is a partnership among the Chicago Public Schools, Richard J. Daley College of the City Colleges of Chicago and IBM.

### Leadership and Staff

- School Leadership: Principal Armando Rodriguez, Assistant Principals Tyrese Graham and Rufino Bustos, Resident Principal Elizabeth Wontor-Leach
- 53 teachers, one STEM Program Manager, one Early College & Career Coordinator, three Counselors, one full-time IBM liaison and one full-time Richard J. Daley College liaison

### Student Profile

- 835 total student population
- Approximately 50% male, 50% female
- 97% Black or Hispanic
- More than 88% of students qualify for free or reduced lunch
- **93% average attendance for 2014 – 15** (District average is 90%)

### Academic Achievements

- **188 students are enrolled in college classes** (Spring 2015)
- Of 12<sup>th</sup> grade students, **17 have earned a total of 20 or more college credits**, and are eligible to complete an Associate in Applied Sciences (A.A.S.) or Associate of Science (A.S) degree in Computer Science, Web Development or Networking Technology by December 2016
- **22 additional students** are on track to complete their associate degree by spring 2017 – within five years of starting at Goode
- **150 10<sup>th</sup> grade students** completed a full-credit Geometry course in summer 2015 to accelerate their high school credits and prepare themselves to begin college courses
- Of students at Goode who have taken or are taking college course:
  - 93 have earned between 3 and 6 college credits
  - 59 have earned between 9 and 15 college credits
  - 42 have earned between 16 and 27 college credits
  - 42 have earned more than 30 college credits

## **NORWALK EARLY COLLEGE ACADEMY (NECA): Norwalk, Connecticut**

Opened in August 2014, Norwalk Early College Academy (NECA) was developed in collaboration among the Norwalk Public Schools, Norwalk Community College and IBM. NECA is Connecticut's first P-TECH 9-14 school. Graduates will earn an Associate in Applied Science degree in either Software Engineering or Mobile Programming. Connecticut opened three additional P-TECH 9-14 schools – known as Connecticut Early Opportunity (CT-ECO) schools – in fall 2015.

### **Leadership and Staff**

- Founding School Director, Karen Amaker
- 6 teachers, 1 full-time IBM liaison, 1 part-time high school liaison
- Student/Teacher ratio is roughly 26:1

### **Student Profile**

- 153 students
- 61% male; 39% female
- 48% Hispanic; 34% Black; 14% White; 4% Asian

### **Academic Achievements**

- 40% of students placed into college-level English and mathematics by the end of Year 1
- 28% of students achieved high honor roll (GPA of 3.4 or higher)
- 22% of students achieved honor roll (GPA of 3.0 – 3.39)

## EXCELSIOR ACADEMY: Newburgh, New York

Excelsior Academy is a partnership among the Newburgh Enlarged City School District, the State University of New York at Orange (SUNY Orange) and IBM. The first program of its kind in the region, Excelsior Academy provides students with the opportunity to earn an Associate in Applied Science (A.A.S.) degree in either Computer Networking (C.I.T.) or Cyber Security in addition to their high school diploma. Housed within Newburgh Free Academy, North Campus, Excelsior Academy is one of 16 P-TECH high schools that opened in fall 2014 as a part of Governor Andrew Cuomo's New York State P-TECH grant. Excelsior Academy students benefit from a small-school environment in which teachers and staff plan each student's program collaboratively.

### Leadership and Staff

- Founding Leadership: Excelsior House Principal Kevin Rothman and Newburgh Free Academy Principal Matteo Doddo
- 4 dedicated teachers, 3 part-time teachers, 2 SUNY Orange adjunct professors, 1 guidance counselor, 1 full-time IBM liaison, 1 full-time SUNY Orange college liaison

### Student Profile

- 100 students (50 ninth graders; 50 10<sup>th</sup> graders)
- 54% male; 46% female
- 54% Hispanic, 32% Black, 13% White, 1% Asian
- 74% of students qualify for free or reduced lunch
- 8% of students have Individualized Education Programs (IEPs)

### Academic Achievements

- **95% attendance rate through January 2016** (4% higher than District high school average)
- **83.3% overall student average** (Year 1 and 2)
- **42%** of student body made honor roll during 1<sup>st</sup> semester of 2015-16 school year (85% overall average or higher)
- **96% pass rate:** New York State Regents Exam for U.S. History
- **83.7% pass rate:** New York State Regents Exam for Algebra I
- **78% (39 of 50) 10<sup>th</sup> grade students** enrolled in college coursework during fall of 2015-16 school year. Of these students:
  - **35/39** earned a least a C in their first semester of college coursework.
  - **15 students** are on track to earn **13 college credits** by the end of the 2015-16 school year
  - An additional **22 students** are on track to earn **7 college credits** by the end of the 2015-16 school year

**READ MORE ABOUT IBM P-TECH (Click on titles to access stories)**

[P-TECH: The School That's Taking Over the World. \*Black Enterprise\*, August 7, 2015](#)

[Educating Technologists. \*The Economist\*, July 16 2015](#)

[Why IBM's CEO Is Hiring Teens. CNN, July 15, 2015](#)

[From High School Calculus Straight to a Job at IBM. \*FastCompany\*, June 18, 2015](#)

[Proving P-TECH Success. \*US News & World Report\*, June 8, 2015](#)

[The Reinventing of the American High School. \*National Journal\*, August 28, 2014](#)

[Why Six Years for High School is Catching On. \*PBS NewsHour\*, April 9, 2014](#)

[The School That Is Changing American Education. \*TIME Magazine\*, February 13, 2014](#)



MASSACHUSETTS  
Department of  
Higher Education

## Massachusetts Definition of College and Career Readiness

*Approved by Massachusetts Board of Elementary and Secondary Education on February 26, 2013; Massachusetts Board of Higher Education on March 12, 2013.*

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### Overview

Massachusetts students who are college and career ready will demonstrate the knowledge, skills and abilities that are necessary to successfully complete entry-level, credit-bearing college courses, participate in certificate or workplace training programs, and enter economically viable career pathways. In order to meet this goal, the Commonwealth has defined a set of learning competencies, intellectual capacities and experiences essential for all students to become lifelong learners; positive contributors to their families, workplaces and communities; and successfully engaged citizens of a global 21<sup>st</sup> century.

Beyond achieving college and career ready levels of competence in English Language Arts / Literacy and Mathematics, all high school students should develop a foundation in the academic disciplines identified in the MassCore course of study,<sup>1</sup> build competencies for workplace readiness as articulated in the Integrating College and Career Task Force Report,<sup>2</sup> and focus on applying academic strategies to problem solving in diverse professional and life contexts, appropriate to individual student goals. Massachusetts will use its 2011 curriculum frameworks,<sup>3</sup> which include the Common Core State Standards, as the basis for an educational program that provides students with the academic knowledge, skills and experiences that are essential to postsecondary educational, career, and personal success.

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### Essential Competencies

#### *Learning*

Students who are college and career ready in English Language Arts / Literacy will demonstrate the academic knowledge, skills, and practices necessary to enter into and succeed in entry-level, credit-bearing courses in College English Composition, Literature, or technical courses; certificate or workplace training programs requiring college-level reading and writing; or a comparable entry-level reading and writing course at the institution. College and career ready students in English Language Arts/ Literacy will be ***academically prepared*** to:

- Read and comprehend a range of sufficiently complex texts independently
- Write effectively when using and/or analyzing sources



- Build and present knowledge through research and the integration, comparison, and synthesis of ideas
- Use context to determine the meaning of words and phrases

Similarly, students who are college and career ready in Mathematics will demonstrate the academic knowledge, skills, and practices necessary to enter into and succeed in entry-level, credit bearing courses in College Algebra, Introductory College Statistics, or technical courses; certificate or workplace training programs requiring an equivalent level of mathematics; or a comparable entry-level math course at the institution. College and career ready students in Mathematics will be ***academically prepared*** to:

- Solve problems involving the major content with connections to the mathematical practices
- Solve problems involving the additional and supporting content with connections to the mathematical practices
- Express mathematical reasoning by constructing mathematical arguments and critiques
- Solve real world problems, engaging particularly in the modeling practice

Successful achievement of specified levels of competence in English Language Arts / Literacy and Mathematics will be required for students to be placed into entry-level courses in college or participate in certificate or workplace training programs without the need for remediation.

### ***Workplace Readiness***

Student preparation for college and career should emphasize career awareness, exploration and immersion as well as development of the foundational knowledge and skills necessary to successfully navigate the workplace. College and career ready students will demonstrate:

#### **Work Ethic and Professionalism**

- Attendance and punctuality expected by the workplace
- Workplace appearance appropriate for position and duties
- Accepting direction and constructive criticism with a positive attitude and response
- Motivation and taking initiative, taking projects from initiation to completion
- Understanding workplace culture, policy and safety, including respecting confidentiality and workplace ethics

#### **Effective Communication and Interpersonal Skills**

- Oral and written communication appropriate to the workplace
- Listening attentively and confirming understanding
- Interacting with co-workers, individually and in teams

Proficiency in these skills is common for success in all workplaces and should be viewed as the foundation upon which additional workplace and career skills are added based on the specifics of any job.

### ***Qualities and Strategies***

Preparation for college and career should help students develop a wide range of quantitative and qualitative abilities that go beyond the minimum levels of competence needed for entry-level college courses and employment. In high school, students should demonstrate:

- Higher order thinking skills of analysis, synthesis, and evaluation
- The ability to think critically, coherently, and creatively
- The ability to direct and evaluate their own learning, be aware of resources available to support their learning, and have the confidence to access these resources when needed.
- Motivation, intellectual curiosity, flexibility, discipline, self-advocacy, responsibility, and reasoned beliefs

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Together these attributes provide the framework for college and career readiness and support educational and workplace success as well as serve as the basis for being an active participant in our democracy.

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<sup>1</sup> [MassCore](#) is a rigorous and comprehensive four year course of high school study recommended by the Commonwealth as preparation for college and career. MassCore is also the vehicle through which high school students can gain competence in computational, scientific, visual, creative, and critical thinking and can engage opportunities for “hands-on” application and exploration of new areas of knowledge and experiences.

<sup>2</sup> See [ICCR Task Force Report](#)

<sup>3</sup> See current [Massachusetts Curriculum Frameworks](#).

## Background

### Development of Massachusetts Definition of College and Career Readiness

In September 2010 Massachusetts came together with 22 other states in the nation to form the [Partnership for Assessment of Readiness for College and Career \(PARCC\)](#). PARCC consortium states are working together to develop a common set of K-12 assessments in English language arts/literacy and mathematics aligned to the Common Core State Standards and anchored in what it takes to be ready for college and careers. The new assessments will help build a pathway to college and career readiness by the end of high school, track students' progress toward this goal, and provide teachers with timely information to inform instruction and provide student support. These next-generation assessments will also send clear signals to students about their readiness for postsecondary coursework while they still have time to address any gaps. In addition, the entire effort is designed to lead to better alignment between higher education and K-12 with regard to a definition of college readiness.

Higher education and elementary and secondary education in the PARCC states are collaborating closely in developing the PARCC assessments. Working together at the national level, representatives of the two sectors developed a structure by which both sides have an equal voice in deciding key matters affecting the character of the assessments—such as the underlying definition of college and career readiness—that affect both higher education and K-12. Each PARCC state, including Massachusetts, committed to developing structures within their states that would similarly engage both sectors in close collaboration, information sharing and decision making.

During the spring and summer of 2011, the Massachusetts Departments of Elementary and Secondary and Higher Education worked together to develop an engagement structure for the Commonwealth that would afford meaningful input and deliberation on the PARCC work—starting with defining college and career readiness—from education stakeholders at the local, regional and statewide levels. The structure included the provision that major policy decisions on key matters related to the PARCC assessments would be brought to the Board of Higher Education and the Board of Elementary and Secondary Education. Massachusetts hosted a statewide launch conference for this work in October 2011.

In December 2011, Richard Freeland, Commissioner of the Massachusetts Department of Higher Education, and Mitchell Chester, Commissioner of the Massachusetts Department of Elementary and Secondary Education, initiated two related “readiness activities” in the P-16 community. Commissioner Freeland requested that all public college and university presidents establish Engagement Teams on each campus, bringing together faculty and staff with P-12 teachers and school/district leaders, and that these Teams collaborate in the development of a shared definition of college readiness for Massachusetts by organizing discussions at the local level and through the Regional Readiness Centers.

During the spring of 2012 the P-16 Campus Engagement Teams, collaborating with over 500 P-16 educators, developed statements on college readiness which, while distinctive in style and language, shared a focus in three interrelated areas—a set of core academic competencies; cognitive skills and strategies; and dispositions and habits of mind. The Engagement Teams also urged support for a Massachusetts definition that would encompass all high school students' preparation for their postsecondary paths by addressing both college and career readiness. By June 1, 2012, the 25 institution presidents submitted their [P-16 Campus Engagement Team reports on defining college readiness](#).

In December 2011, the Board of Elementary and Secondary Education (BESE) appointed a 36-member task force of business, education, and community leaders to develop recommendations on better integrating college and career readiness into K-12 education. The Integrating College and Career Readiness Task Force (ICCR), chaired by BESE member Gerald Chertavian, included Commissioner Freeland and other representatives from higher education as members. The Task Force was charged to identify: "power" standards (knowledge and skills) inherent in a core career development education program; indicators of career readiness, including student assessments; and policies and programs that provide multiple pathway options to integrate knowledge and skills for career and postsecondary education readiness; as well as to adopt a clear, measurable definition of career readiness.

The ICCR Task Force defined career readiness as follows: "Career readiness means an individual has the requisite knowledge, skills and experiences in the academic, workplace readiness and personal/social domains to successfully navigate to completion an economically viable career pathway in a 21st century economy." The [ICCR Task Force Report](#) was presented to the Board of Elementary and Secondary Education on June 26, 2012.

The definitions developed and submitted by the P-16 Campus Engagement Teams and the ICCR Task Force in the spring of 2012 stated clear support for the integration of college and career readiness in Massachusetts' work to develop a shared statewide definition. The readiness perspectives of the Engagement Teams and ICCR Task Force were synthesized and a draft Massachusetts definition was prepared for review by a statewide 14-member coordinating council co-chaired by Commissioners Chester and Freeland and comprised equally of P-12 and higher education representatives. A draft definition of college and career readiness reflecting the council's feedback was circulated among education, business and community groups during the summer of 2012. Of more than 1360 survey participants who responded by October 2012—47% from higher education, 48% from P-12 and 5% other—more than 80% supported the draft definition. In November, the statewide coordinating council convened to finalize the shared draft definition and to recommend its consideration by the Board of Elementary and Secondary Education and the Board of Higher Education.

Massachusetts' draft definition conveys that a high school graduate who is "college and career ready" is a student prepared, on a college path, to enroll in entry-level, credit-

bearing college courses without the need for remediation; and on a job and career path, to participate in certificate training programs and workplace training programs.

The definition also builds upon the Commonwealth's focus on English language arts and mathematics as the specific academic areas that will be assessed by PARCC and then used in the postsecondary environment to help determine readiness for—or placement into—entry-level, credit-bearing courses. Thus, Massachusetts' definition of college and career readiness is designed to link to the Commonwealth's future K-12 assessment instruments and higher education placement policy for English language arts and mathematics.

Finally, the definition is based on the foundation that students will have developed consistent, challenging, intellectual growth, in all subject areas, throughout their high school program as a result of the full implementation of the [Massachusetts Curriculum Frameworks](#) (which include the Common Core State Standards) and the [MassCore](#) recommended course of study. Underpinning Massachusetts' definition of College and Career Readiness are all of the Commonwealth's P-12 teaching and learning policies that address students' diverse learning challenges and support the abilities of all students' to learn and achieve.

# April Meeting Materials

## Career Forward Task Force

### Agenda

April 22, 2016

*Light Breakfast - (Optional) starting at 8:15am*

- |      |   |            |
|------|---|------------|
| I.   | <i>Welcome &amp; Review of Charge and Approach</i><br>Dr. Candice McQueen<br>TN Commissioner of Education   | 8:30 a.m.  |
| II.  | <i>Education and Workforce: Recent Federal Activity and Acts</i><br><i>An Overview of WIOA, ESSA, Perkins and Their Interconnectedness</i><br>Steve Voytek<br>Advance CTE, Washington D.C.  | 8:45 a.m.  |
| III. | <i>Small Group Discussion</i>   | 9:30 a.m.  |
| IV.  | <i>Break</i>  | 9:45 a.m.  |
| V.   | <i>State Economic &amp; Workforce Development</i><br><i>Plans, Approaches and Projections</i><br>Burns Phillips, TN Commissioner of Labor & Workforce Dev<br>Ann Thompson, Dir. Workforce Dev, TN Dept of Econ & Comm Dev<br><i>Employer Panel:</i> Jeff Frazier, Dir. Eastman Chemical/RCAM<br>Cal Wray, Exe. Dir. Clarksville-Montgomery County EDC<br>Suzanne Payne, Dir. Corp Social Responsibility, Unum<br>Joining: Burns and Ann | 9:55 a.m.  |
| VI.  | <i>Secondary and Postsecondary CTE in TN (Readiness Series)</i><br><i>Secondary:</i> Candi Norwood, Dir. Student Success, TDOE<br>Chelsea Parker, Exec. Dir. Work-Based Learning, TDOE<br>Blake Shearer, Coord. HS Interventions-Transitions, TDOE<br><i>Postsecondary:</i> Chelle Travis, Asst. V.C. Student Services, Office of TCAT, TBR<br>Michael Tinsley, Coord. Perkins IV, Office of CC, TBR<br><br><i>Q&amp;A:</i> All         | 10:55 a.m. |
| VII. | <i>Lunch Break</i>  | 11:50 a.m. |



- |       |  |            |
|-------|--|------------|
| VIII. | <i>Small Group Discussion</i>                | 12:10 p.m. |
| IX.   | <i>Circling Back</i><br>Commissioner McQueen | 12:55 p.m. |
| X.    | Dismissal                                    | 1:00 p.m.  |





## CAREER FORWARD TASK FORCE

April 22, 2016

### CHARGE: CAREER FORWARD TASK FORCE

- Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
- Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.



Career Forward Task Force

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### APPROACH: CAREER FORWARD TASK FORCE

The Task Force will meet monthly to learn, listen, discuss, and craft recommendations. In doing so, the Task Force will work to answer three guiding questions.

1. How do we know when a student is “career ready” at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state’s economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?



Career Forward Task Force

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### MARCH MEETING: TAKEAWAY QUESTIONS

- What are the best predictors of postsecondary and career readiness?
- How are we tracking outcomes? Where are our students going and what are they doing?
- Should we be encouraging more Early College opportunities?
- How are we making student “pathways” more obvious and best using our school counselors?
- How are we embedding more authentic experiences for all students?



Career Forward Task Force

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### AREAS OF FOCUS/REMAINING MONTHS

#### March:

Kickoff: focused on Charge and Setting the Stage; high level review of Interconnectedness of Education, Industry, and Career Choices

#### April:

Review of Federal Acts and State Approaches around Education, Labor and Industry; Begin defining a “Ready Student” by review of TN’s secondary/postsecondary CTE and Work-Based Learning

#### May:

Dive into defining a “Ready Student” by review of data available and where there are gaps; review Early Postsecondary, Student Transitions; Pathways TN; Role of Certain Adult Stakeholders (e.g. counselors); ACT WorkKeys

#### June:

Structures and Systems: existing Strengths, Alignments, Barriers, Gaps, Culture/Perceptions, Models of Practice at State, Regional, Local Levels; Areas of Opportunity

#### July:

ROI of Education-Industry Partnerships, New Approaches to Data Collection, Evaluation, and Assessment to Ascertain “Ready Student;” Sustainability Issues

#### August:

Discuss Identified Overarching Principles and Recommendations; Gain Sign Off



Career Forward Task Force

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### FOCUS OF APRIL GATHERING

#### I. WELCOME & REVIEW OF CHARGE AND APPROACH

II. EDUCATION AND WORKFORCE: RECENT FEDERAL ACTIVITY AND ACTS AN OVERVIEW OF WIOA, ESSA, PERKINS AND THEIR INTERCONNECTEDNESS

#### III. SMALL GROUP DISCUSSION

IV. STATE ECONOMIC & WORKFORCE DEVELOPMENT PLANS, APPROACHES AND PROJECTIONS: PRESENTATION AND EMPLOYER PANEL

#### V. SECONDARY AND POSTSECONDARY CTE IN TN (DEFINING READINESS SERIES)

#### VI. LUNCH BREAK

#### VII. SMALL GROUP DISCUSSION

#### VIII. CIRCLING BACK & DISMISSAL



Career Forward Task Force

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## Federal Education and Workforce Development Policies: Weaving Together WIOA, ESSA, and Perkins

Steve Voytek, Government Relations Manager  
April 22, 2016

## Today's Agenda

- Overview, crosscutting themes, and policy mechanics of:
  - WIOA
  - ESSA
  - Perkins
- Where to from here?
- Q & A

## Workforce Innovation and Opportunity Act (WIOA)

## How We Got Here

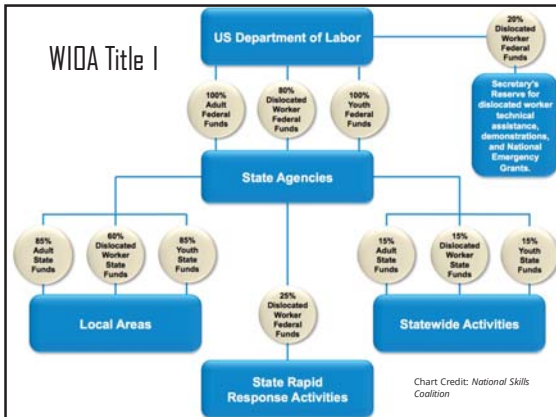
- Signed into law July 2014, replaces the Workforce Investment Act (WIA)
- Implementation began July 1, 2015
- Focus on alignment across federal workforce, education programs

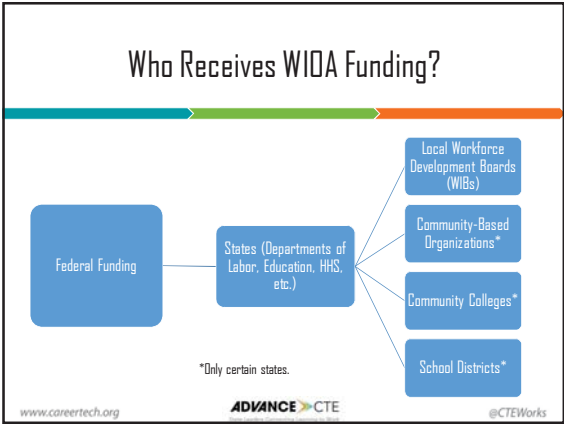


## WIOA- Four Titles

- Title I – Workforce Development Activities
- Title II – Adult Education & Family Literacy (AEFLA)
- Title III – Wagner-Peyser Act (Employment Services)
- Title IV – Rehabilitation Act of 1973 (Vocational Rehabilitation)

## WIOA Title I





## WIOA Title I- Governance & Infrastructure

- Requires establishment of business-led state and local workforce development boards (WDBs)
- Local WDBs oversee one-stop system, select providers of adult and youth services
- American Job Centers -must provide universal access to core programs, other federal workforce programs

americanjobcenter

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- ## WIOA Key Changes/Themes
- New state and local planning options
  - Cross-program data and measurement
  - Program implementation (career pathways/ sector strategies)
  - Two most emphasized terms:
    - "In-Demand" industries/ occupations/ sectors
    - "Economic self-sufficiency"
  - Youth funding: ISY vs DSY (16-24)
  - Participant choice (elimination of sequence of services)
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## Every Student Succeeds Act (ESSA)

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State leaders. Connecting learning to work.

## How We Got Here

- Signed into law December 2016, replaces the No Child Left Behind Act (NCLB)
- Implementation began January, 2016
- Focus on state and local flexibility for the law's implementation

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## ESSA - An Overview

- Renews the Elementary and Secondary Education Act of 1965 (ESEA)
- Supplemental federal funds for high-needs districts/schools
- Promote and strengthen student achievement
- Scope of ESEA has grown substantially since 1965
- ESSA narrows scope and devolves much of the former federal role/responsibilities to state and local entities


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### ESSA: Roles and Responsibilities (simplified)

	USDE	SEA	LEA
<b>Funding</b>	Determine state allocations	Determine LEA allocations	Determine school allocations
<b>Plans</b>	Review and approve state plans	Review and approve LEA applications	Develop and submit application for funds to SEA
<b>Assistance &amp; Guidance</b>	Provide technical assistance and guidance (non-binding) to SEAs	Provide technical assistance to LEAs	Administer funds in accordance with ESSA
<b>Compliance</b>	Monitor SEAs' compliance with the law	Monitor LEAs' compliance with statute and state laws	Be responsive to monitoring visits by SEA
<b>Data / Reporting</b>	Collect data and information/develop non-regulatory guidance (non-binding)	Collect data and information required to fulfill requirements of ESSA	Submit data and reports as required

### ESSA – Standards & Assessments


- States must establish “challenging standards” in:
  - English/Language Arts;
  - Mathematics; and
  - Science
- Annual assessments in grades 3 through 8 + once in high school
- Allowable: Innovative Assessment Pilots



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### ESSA – Accountability/ Public Reporting

- States establish long-term, statewide goals and interim targets
- States create accountability system that must incorporate five metrics
- States establish methodology for identifying low-performing schools + related intervention processes
- States and districts must make available to the public “report cards” on annual basis



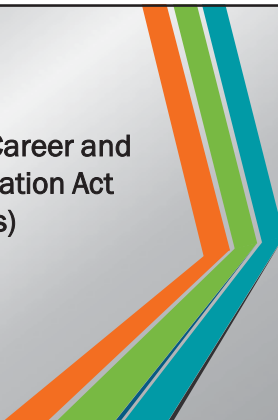
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### ESSA – Key Intersections WIDA/Perkins

- State and local plan coordination
- State standards development
- “*Well-Rounded Education*” & CTE
- “*Recognized postsecondary credentials*”
- Measure(s) of “*school quality or student success*”
- Greater support for dual/concurrent enrollment
- Student transitions between secondary and postsecondary education

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## Carl D. Perkins Career and Technical Education Act (Perkins)

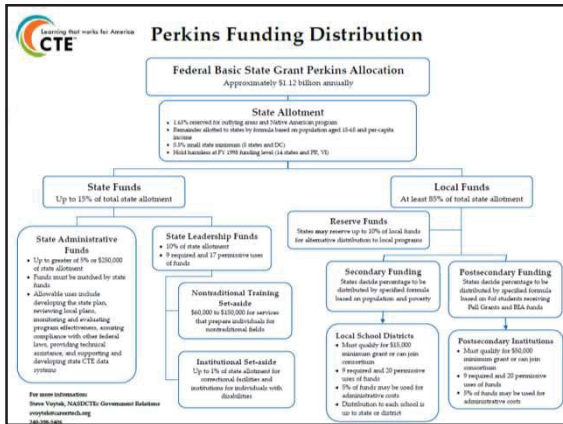


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Advancing Quality Career and Technical Education

### Perkins – An Overview

- Sole federal investment in CTE
- Sets expectations framework for CTE programs
- Codified “CTE” in lieu of “vocational education”
- Overarching purposes of Perkins:
  - Program improvement/scalability
  - Systems alignment
  - Bridge Builder\*

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## Five Defining Themes of Perkins IV

- Academic and technical integration
- Accountability and improvement
- Links to business and industry
- Secondary-postsecondary connections
- Linkages between other federal programs (WIA, ESEA, and HEA)

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## Perkins V Reauthorization: Emerging Issues

- Alignment to other federal legislation
- Labor market alignment
- Public-private partnerships
- Secondary-postsecondary connections
- Performance/accountability
- Supporting innovation & state flexibility
- Ensuring equitable access

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## Weaving it All Together

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## Federal Policy Landscape: An Outlook

- Order of Congressional consideration of WIOA → ESSA → Perkins → HEA is significant
- Tight federal fiscal environment (programs are asked to do more with less)
- Pendulum between federal and state roles/responsibilities has swung

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## Federal Intersection Points and Strategies to Think About

- Accountability systems:
  - Share responsibility across programs/systems
  - Establish limited set of quality indicators
  - Design programs/services around desired outcomes
- Braiding funding streams
- Performance-based/incentive funding
- Connecting Career Pathways, CTE POS, and Sector Strategy initiatives

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## Where is Federal Policy Going from Here?

- Recognition that PS education is a necessity
- Systems alignment:
  - Program delivery/implementation
  - Data systems
  - Common definitions/terminology
- Focusing on outcomes, not inputs
- Leveraging data for program development, implementation, and improvement

## Questions?

Steve Voytek  
[svoytek@careertech.org](mailto:svoytek@careertech.org)

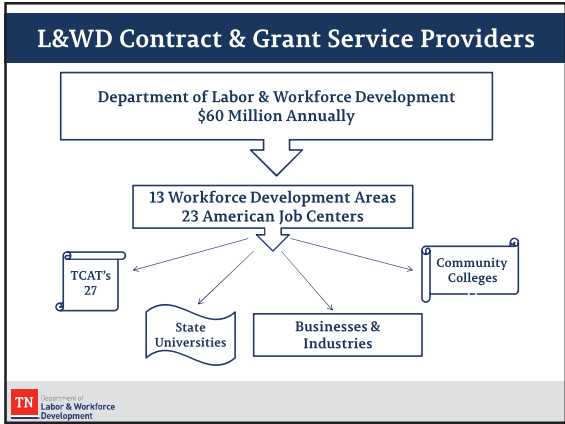


**Department of Labor & Workforce Development**

**Career Forward Task Force**

“ A Job Cures Many Ills”

Burns Phillips - April 22, 2016



### LWD Workforce Development ROI



\$1 = \$38.00 - \$58.00  
Wages

\$7.85 Taxes

Sparks Bureau of Business and Economic Research/Center for Manpower Studies, University of Memphis

TN Department of Labor & Workforce Development

### LWD - Workforce Services Goals

**Increase Entered Employment Rate of Participants Served**

Baseline 55% - Goal 60% Performance 66% and 67%

★

**Implementation of W.I.O.A. Combined State Plan**

TN Department of Labor & Workforce Development



**Continual Learning**

### Economic Competitiveness

Having a Steady Supply of High Skilled Workers (Scientists, Researchers, Engineers) is Most Often Perceived as the Top Requirement for Manufacturing Competitiveness.

★

However, Having the Capacity for Innovation Driven by a Plentiful and Skilled Workforce at **All Levels** is What Will Ultimately Differentiate the Long Term Winners in the Race for Manufacturing Competitiveness and Economic Growth.

TN Department of Labor & Workforce Development

## Rapid Evolution of Technology

80% of Technology Now in Use Will be  
Obsolete in 10 Years



33% Existing Jobs - 50% New Jobs

Created Between 2008-2018 Will Require  
a Postsecondary Degree or Credential

## 2020 Workforce

By 2020 only 20% of the workforce will  
come from U.S. public schools.....

80% of workforce will consist of  
adults currently in the workforce or  
those trying to enter it today!

## Tennessee Workforce 2016

3,050,000

550,000  
No High School Diploma

900,000  
Unfinished Post Secondary Credentials

## Looking Forward

P.I.V.O.T

“Providing Innovative Viable Opportunities  
for Training”

## JSCC AMT Consortium – Jackson Tennessee

Advanced Maintenance Technical Co-op  
(Toshiba)

Twenty Businesses and Jackson State Community College  
2 Year Program

Students Work 2 Days a Week (\$12 hour) , Classroom 3 Days a Week

Businesses Each Contribute \$500 to Consortium Annually

Businesses Also Contribute Equipment to Jackson State

## Lee Company – Nashville Tennessee

Lee University

Accredited Training Site (ATS)  
Through  
National Center for Construction Education & Research  
(NCCER)

Partnership with Lipscomb University and the Department of  
Education to find non-traditional formats of education and  
through help from the American Council of Education accrediting  
LCU hours for college credit towards an *applied science degree*.





## BUSINESS DEVELOPMENT

New Industry Recruitment	Existing Industry Expansion	Entrepreneurship
<ul style="list-style-type: none"> <li>FastTrack Grant Program</li> <li>Select Tennessee</li> <li>Memphis Megasite</li> </ul>	<ul style="list-style-type: none"> <li>FastTrack Grant Program</li> <li>TNTrade</li> <li>Film, Entertainment &amp; Music Commission</li> </ul>	<ul style="list-style-type: none"> <li>Business Enterprise Resource Office</li> <li>Launch Tennessee</li> </ul>

Department of Economic & Community Development

## REGIONAL JOB BASE CAMPS

Department of Economic & Community Development

## PROJECT MANAGEMENT TEAM

Alex Bertelli
Jamari Brown
Bryan Farlow
Cody Huddleston
Chassen Haynes
Victoria Hirschberg

Aerospace & Defense	Healthcare Business	Advanced Manufacturing	Food & Agribusiness	Automotive	Automotive
Energy Tech.	Services Headquarters	Warehouse, Distribution & Logistics	Chemicals, Plastics & Rubber		
	Data Centers				
	Call Centers				
	Back Office				

Department of Economic & Community Development

## RURAL DEVELOPMENT AND EDUCATION ALIGNMENT

Rural Development	Education Alignment
<ul style="list-style-type: none"> <li>ThreeStar</li> <li>Tennessee Main Street</li> <li>Tennessee Downtowns</li> <li>Retire Tennessee</li> <li>National Flood Insurance Program</li> </ul>	<ul style="list-style-type: none"> <li>Community Development Block Grants</li> <li>Delta Regional Authority Grants</li> <li>Appalachian Regional Commission Grants</li> </ul>
	<ul style="list-style-type: none"> <li>Tennessee Promise</li> <li>Tennessee Reconnect</li> <li>Tennessee LEAP</li> <li>Workforce360</li> </ul>

Department of Economic & Community Development

## CDBG, ARC, DRA

### Community Development Block Grants

- Administer funding from the U.S. Department of Housing and Urban Development to promote economic and community development in small cities across the state
- Most common projects include sewer and water system improvements, community livability projects such as the purchase of fire trucks, drainage improvements, building community centers, and extending water and sewer lines
- Since 2011, more than \$190 million in projects have been funded

### Appalachian Regional Commission Grants

- Receive approximately \$6 million per year for community and economic development projects in the 52 Middle and East Tennessee counties served by the ARC
- Focused on funding projects that have job creation associated with them

### Delta Regional Authority Grants

- Receive approximately \$1 million per year for community and economic development projects in the 21 West Tennessee counties served by the DRA
- Focused on projects that improve workforce development, improve health outcomes, and create jobs

## FOREIGN DIRECT INVESTMENT

### FOREIGN DIRECT INVESTMENT

- There are 919 foreign-based establishments employ over 126,000 people in Tennessee.
- These establishments have committed \$33.3 billion in capital investment.

### TOP FDI COUNTRIES

Parent Country	Capital Investment
Japan	\$17.7 B
Germany	\$5.1 B
Canada	\$2.5 B
United Kingdom	\$1.4 B
Korea	\$993 M

Source: TNECD

### EXPORTS IN TENNESSEE

- Tennessee exports totaled more than \$32.4 billion in 2015
- Exports from the state have increased 25.0% since 2010
- Top export markets include: Canada, Mexico, China, Japan and Belgium
- Top export products include: Medical Equipment and Supplies; Motor Vehicle Parts; Motor Vehicles; Computer Equipment; and Navigational, Measuring, Medical and Control Instruments

Source: USATrade

## BUSINESS CLIMATE



## QUALITY OF LIFE

130  
State Parks and  
Natural Areas

2nd  
Lowest cost of living of  
any state

30.3%  
Below the national  
average of  
housing prices



## ACCOLADES

First-ever back-to-back State of the Year  
winner for economic development  
2013 and 2014  
Business Facilities

#4

State for jobs created  
through FDI in 2014  
IBM's Global Location  
Trends Report

#1

Certified Sites and Shovel-  
Ready Programs  
Area Development

#1

Education: Race to the  
Top Leaders  
Business Facilities

#1

Overall Infrastructure and  
Global Access  
Area Development

#1

Automotive Manufacturing  
Strength  
Business Facilities

#2

Best Business Climate  
Business Facilities

## CORPORATE HEADQUARTERS IN TENNESSEE



Home to 11 Fortune 500 Companies

## ANNOUNCEMENTS

<b>2,000 Jobs</b> <b>\$600mm</b> Chattanooga	<b>1,500 Jobs</b> <b>\$102mm</b> Mt. Juliet	<b>300 Jobs</b> <b>\$1.6B</b> Clinton	<b>1,800 Jobs</b> <b>\$800mm</b> Clarksville	<b>3,474</b> <b>\$149.05mm</b> Murfreesboro Nashville Chattanooga Charleston Lebanon
<b>4,332 Jobs</b> <b>\$810.35mm</b> Smyrna Dechard	<b>125 Jobs</b> <b>\$321mm</b> Memphis	<b>1,500 Jobs</b> <b>\$66.15mm</b> Nashville	<b>1,164 Jobs</b> <b>\$585mm</b> Maryville Athens	<b>70 Jobs</b> <b>\$600mm</b> Clarksville

13

## TENNESSEE INCENTIVES

**State Incentives Include:**

- Training grants
- Infrastructure grants
- Discretionary grants covering other expenses
- Tax credits and exemptions

**Incentives are based on:**

- Number of Jobs
- Quality of Jobs
- Capital Investment
- Location

In Tennessee, we're fostering economic growth with flexible incentives that reduce capital expenses, lower operating costs and minimize risk.

14

## ELIGIBLE INDUSTRIES

Type	Description
<b>Headquarters</b>	Administrative, research and development, planning, marketing, personnel, legal not manufacturing, distribution, wholesaling, or call centers
<b>Manufacturing</b>	Principle business is fabricating or processing of tangible property for resale
<b>Data Centers</b>	Building or buildings, either newly constructed or remodeled, housing high-tech computer systems and related equipment
<b>Warehouse &amp; Distribution</b>	Storage or distribution of finished tangible personal property. Does not include a location where tangible personal property is processed, manufactured, sold to customers or assembled
<b>Call Centers</b>	Uses telecommunications in customer service, soliciting sales, reactivating accounts, surveys or research, fundraising, collecting receivables, reservations, taking or receiving orders

15

## ENHANCED JOB TAX CREDIT

Tennessee counties designated as **Tier 2** and **Tier 3** Enhancement Counties are entitled to the Standard Job Tax Credit and an additional annual Enhanced Job Tax Credit.

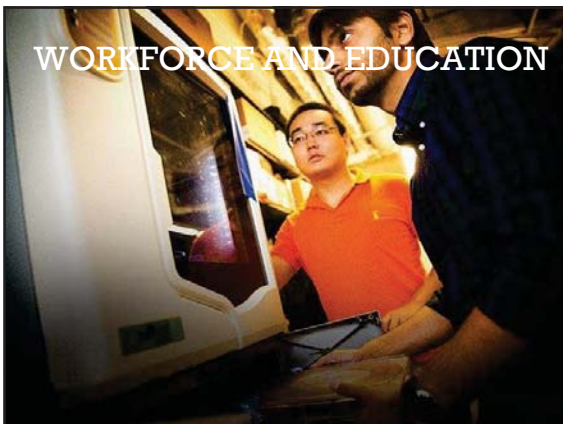
■ Tier 1 Enhancement Counties: \$4,500 job tax credit with 15-year carry forward

■ Tier 2 Enhancement Counties: \$4,500 job tax credit with 15-year carry forward plus additional 3 years at \$4,500 per year with no carry forward

■ Tier 3 Enhancement Counties: \$4,500 job tax credit with 15-year carry forward plus additional 5 years at \$4,500 per year with no carry forward

NOTE: Job Tax Credit may be applied against a company's franchise and/or excise tax liability. To qualify for the Job Tax Credit, a company must create 25 net new full-time jobs and increase capital investment by \$500,000 in a qualified business enterprise within a 36-month period.

16



10

Public Universities

27

Colleges of Applied Technology

13

Community Colleges

75

Tennessee Career Centers and affiliated sites

\$10M

In grants awarded to regional partnerships to fill skill gaps in 2014

35

Independent Colleges and Universities

411,749

People enrolled in college in 2013

63,911

Graduates with an Associates Degree or higher in 2013

17

## DRIVE TO 55

One of Governor Bill Haslam's key policy objectives is to ensure 55% of Tennesseans hold a post-secondary degree or certificate by 2025.

### Tennessee Promise

Beginning in Fall 2015, high school graduates can attend a community college or college of applied technology absolutely free of tuition and fees

### Tennessee Reconnect

Allows adults to complete their post-secondary credential by attending one of our 27 Tennessee Colleges of Applied Technology completely free of tuition and fees

### Tennessee LEAP

Ensures our post-secondary institutions are producing the skills and credentials that Tennessee employers actually need by identifying and filling skill gaps across the state



## Drive to 55

- Governor Haslam initiated the Drive to 55 programs with a mission of having 55.0% of Tennessee's working age adult population equipped with a college degree or certificate by 2025.

No. Tennesseans (Age 25-64) by Highest Credential	2012	2013	2014	2015
Certificate	136,630	136,794	137,530	138,304
Associate's	250,219	257,289	256,817	260,210
Bachelor's	583,335	582,617	605,594	616,128
Graduate or professional	300,693	317,495	315,247	322,939
<b>Total</b>	<b>1,272,877</b>	<b>1,294,249</b>	<b>1,315,188</b>	<b>1,377,581</b>
% of population age 25-64 with a postsecondary credential	37.3%	37.8%	38.3%	38.7%

## Drive to 55



- 16,291 Students Enrolled in Fall, 2015
- 1700 TCAT Students, 94.7% Retention Rate
- 3,500 Students Enrolled in TCATs Fall, 2016
- Nearly 5,000 Adults Enrolled in Fall 2015
- Some college, no degree:
  - 105,000 are over 50% complete
  - 25,000 may have enough credit hours to graduate

## Counties Served by LEAP



1,591 HS Students in LEAP Courses

630 PS Students in LEAP Courses

13,363 Total Students Touched

## WORKFORCE360°



## CENTER FOR ECONOMIC RESEARCH IN TENNESSEE

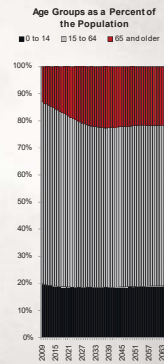


## AGE DEMOGRAPHICS

Dependency ratios were a second index component, reflecting the share of population age 15-64 relative to young & old dependents.

Retirements driven by the baby boomer cohort represent a disruptive trend for organizations. Businesses may have greater incentive to adopt technologies that automate workforce tasks. Education will need to rise to fill vacancies created as the baby boomer generation retires.

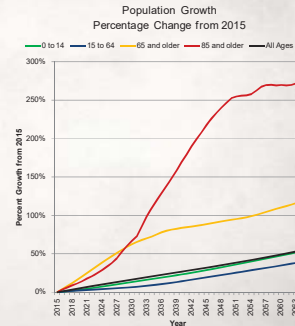
- Pressure on the working age population will rise.
- Population under age 15 is projected to remain around 19% of the total population until 2064.
  - Working age population will decline from 67% of population to 59% by 2032, where it will remain until 2064.
  - The senior population (age 65+) will grow from 13% of the population to 22% by 2032, where it will remain until 2064.



Sources: CBER's Population Projections; U.S. Census Bureau

## POPULATION GROWTH

- The number of individuals aged 85+ in Tennessee is expected to triple from 2010 to 2040.
- The working age population (15 to 64) is projected to grow at a slower rate than the total population - 14% from 2015 to 2040 and 39% from 2015 to 2064.
- The retirement age population (age 65 and older) is projected to grow at a much higher rate than the total population - 84% from 2015 to 2040 and 118% from 2015 to 2064.



Sources: CBER's Population Projections; U.S. Census Bureau

## 2015 ANNUAL LEAP REPORT

Tennessee Labor Education Alignment Program (LEAP) is a \$10M grant opportunity designed to ensure postsecondary institutions are producing the skills and credentials that Tennessee employers actually need through alignment of education and industry.

**STEM and STEM-Related Occupations:** Science, Technology, Engineering and Math (STEM) occupations in Tennessee are projected to have many openings and are high wage jobs.

**IT (Computer) Occupations:** Computer occupations are projected to grow rapidly and have high wages. These occupations include computer scientists, system analysts, software and web developers, etc.

**Industry Concentration:** Many of the occupations in the LEAP report have a high concentration of employment within the following industries:

- Health Care and Social Assistance
- Professional, Scientific and Technical Services
- Manufacturing
- Finance and Insurance
- Wholesale Trade
- Information
- Education Services
- Construction
- Transportation and Warehousing
- Retail Trade

Sources: CBER's Population Projections; U.S. Census Bureau

## 2015 ANNUAL LEAP REPORT

Drive to 55 is not just a mission for higher education, but a mission for Tennessee's future workforce and economic development.

**Retirement Age Demographics:** Retirements of the baby boomer generation have significant impacts on the workforce nationwide. Workers age 55 and older are nearing retirement age over the next decade, and it will be important that when these talented workers choose to retire the workforce is prepared to fill the gaps created.

Tennessee has a skills gap in several occupations that also have a relatively high share of workers age 55 and older:

- Tool and Die Makers
- Industrial Engineers
- Maintenance and Repair Workers, General
- Heavy and Tractor Trailer Truck Drivers
- Medical Equipment Repairers
- First-Line Supervisors of Mechanics, Installers and Repairers
- Production, Planning and Expediting Clerks
- Operations Research Analysts
- Information Security Analysts
- Medical and Clinical Laboratory Technologists
- Healthcare Social Workers

Sources: CBER's Population Projections; U.S. Census Bureau

## TENNESSEE WORKFORCE DISRUPTION INDEX

1.4 Million (50%) of Tennessee's current jobs have a high probability of automation



The map above shows the percent of jobs that are vulnerable to automation in each county.

**Occupation groups with greatest share of vulnerable jobs:** 1) Food preparation and serving occupations—91.8% of TN jobs are vulnerable 2) Sales occupations—76.8% 3) Production occupations—76.3% 4) Transportation and material moving occupations—73.2% 5) Office and administrative support occupations—66.0% 6) Construction and extraction 62.9%

**Lower-wage occupations are more vulnerable to replacement by automation:** The average hourly wage of jobs with a high probability (70 percent or higher) of automation is \$14.56, five dollars lower than the average hourly wage for all jobs.

Sources: CBER's Population Projections; U.S. Census Bureau

## TENNESSEE WORKFORCE DISRUPTION INDEX

**37% of the wages of Tennessee workers could be lost:** If automation occurred in the occupations with a high probability of automation, 37 percent of the wages of workers in Tennessee could be lost.

The three counties with the highest percent of expected lost wages are Bedford—49%, Sevier—48%, and Henderson—47%.

**Dependency Ratios:** Accelerated rates of retirements currently driven by the baby boomer cohort represent a highly disruptive trend for organizations.

Cumberland—78%, Clay—69% and Loudon—69% have the highest dependency ratios—the ratio of the dependent population to the working age population (age 15 to 64).

**Educational Attainment:** Educational attainment will improve or prevent the ability of a workforce to manage and align with automation.

Lake—9%, Hardeman—13% and Morgan—14% have the lowest attainment of an Associate's degree or higher for the population age 25 to 64.

**Rural counties are more vulnerable to the disruptive effects of automation:** Of Tennessee's 17 urban counties, only three—Hamblen, Loudon, and Bradley—are ranked in the most vulnerable two-thirds of Tennessee counties.

Sources: CBER's Population Projections; U.S. Census Bureau

## Educational Attainment

Educational attainment was the third index component: the percent of population age 25-64 with an Associate's degree or higher.

Educational attainment will improve a community's ability to manage and align with automation; to complement and take advantage of automation.

### Automation will disrupt the workforce landscape – not replace it.

- Greater demand for critical thinking, judgment, human perception, creativity, social intelligence
- Technology can complement labor, and boost productivity, incomes, leisure time

### Tennessee is on the right track.

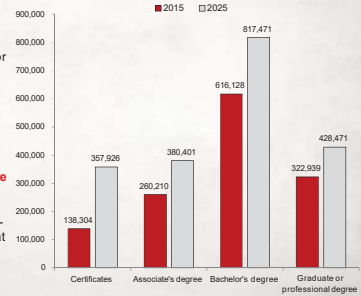
- Based on projections that 55% of future jobs will require postsecondary education, Tennessee's Drive to 55 mission is to ensure 55% of our workforce holds a postsecondary credential by 2025.
- Tennessee has become the leading state in the nation for high school seniors completing the Free Application for Federal Student Aid (FAFSA), with 68% of the 2015 class submitting the form.



## ECONOMIC BENEFITS OF POSTSECONDARY DEGREES

**68% of the 2015 Class Completed the FAFSA:** Tennessee has become the leading state in the nation for high school seniors completing the Free Application for Federal Student Aid (FAFSA), with 68% of the 2015 class submitting the form.

**10.1% Increase in First-time Freshman Enrollment at Public Institutions:** Tennessee increased its first-time freshman enrollment at public institutions by 10.1% between Fall 2014 and Fall 2015.



## ECONOMIC BENEFITS OF POSTSECONDARY DEGREES

**\$9.3 Billion in Additional Income Annually to Tennessee's Workforce:** An estimated 528,630 additional certificate or degree holders will work in Tennessee upon achievement of 55 percent postsecondary attainment by 2025. These workers are projected to earn \$9.3 billion more in additional income annually than that which would have been generated without a postsecondary credential.


**Incremental Income Boost with Postsecondary Attainment:** On average, a high school graduate in Tennessee could earn \$5,941 more per year with a certificate or an associate's degree, \$18,860 more per year with a bachelor's degree and \$30,949 more per year with a graduate or professional degree in 2015.

Median Earnings by Level of Education in Tennessee	
Level of Educational Attainment	Median Earnings (in 2015 dollars)
Less than high school graduate	\$19,035
High school graduate (includes equivalency)	\$26,365
Some college or associate's degree	\$32,306
Bachelor's degree	\$45,225
Graduate or professional degree	\$57,314



**THANK YOU**  
State of Tennessee Department of Economic & Community Development

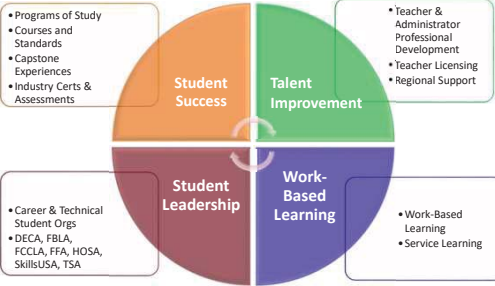
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## Secondary CTE in Tennessee

Candi Norwood, Director of Student Success  
Office of CTE, Division of College, Career & Technical Ed

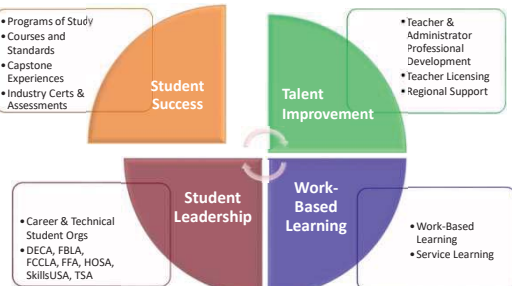
### SECONDARY CTE IN TN



- Student Success:**
  - Programs of Study
  - Courses and Standards
  - Capstone Experiences
  - Industry Certs & Assessments
- Talent Improvement:**
  - Teacher & Administrator Professional Development
  - Teacher Licensing
  - Regional Support
- Student Leadership:**
  - Career & Technical Student Orgs
  - DECA, FBIA, FCCLA, FFA, HOSA, SkillsUSA, TSA
- Work-Based Learning:**
  - Work-Based Learning
  - Service Learning

TN Department of Education Career Forward Task Force

### SECONDARY CTE IN TN




- Student Success:**
  - Programs of Study
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  - Regional Support
- Student Leadership:**
  - Career & Technical Student Orgs
  - DECA, FBIA, FCCLA, FFA, HOSA, SkillsUSA, TSA
- Work-Based Learning:**
  - Work-Based Learning
  - Service Learning

TN Department of Education Career Forward Task Force

### CTE IN THE PAST

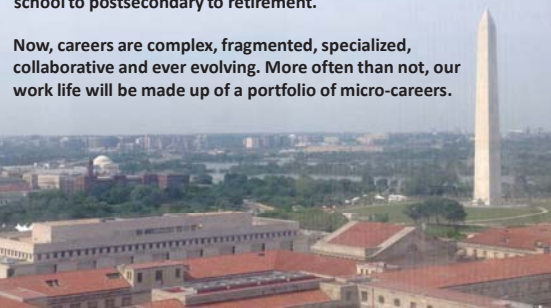
- Strictly Skills-Based
- Programs of Study may not match regional opportunities
- Minimal Focus on Postsecondary Opportunities
- Students deemed not going to "College" were placed in these classes



TN Department of Education Career Forward Task Force


In the past, careers were stable, linear and singular. People chose one path and pursued it over the course of their lives from high school to postsecondary to retirement.

Now, careers are complex, fragmented, specialized, collaborative and ever evolving. More often than not, our work life will be made up of a portfolio of micro-careers.



TN Department of Education Career Forward Task Force 5

### TODAY'S CTE IS NOT YOUR OLD VOCATIONAL EDUCATION



WE HAVE TO THINK DIFFERENTLY ABOUT HUMAN CAPACITY

ACADEMIC

ABSTRACT

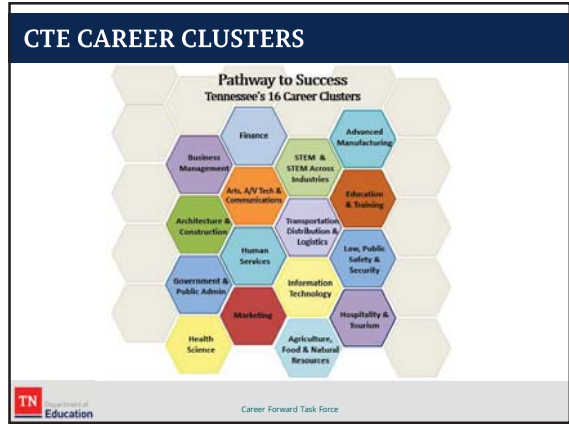
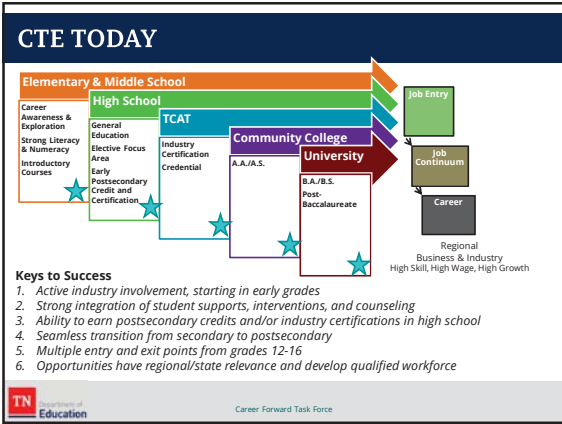
NON-ACADEMIC

THEORETICAL

$e=mc^2$

YOU ARE A MYTH!

TN Department of Education Career Forward Task Force 6



### STUDENT PATHWAY: ANATOMY OF PROGRAMS OF STUDY

Career Cluster	Program of Study	Level 1	Level 2	Level 3	Level 4
Health Science	Diagnostic Services	Health Science Education	Diagnostic Medicine	Anatomy and Physiology -and/or- Medical Terminology	Cardiovascular -and/or- Clinical Internship
Advanced Manufacturing	Mechatronics	Principles of Manufacturing	Digital Electronics	Mechatronics I	Mechatronics II -or- Manufacturing Practicum
STEM	Technology	Principles of Engineering and Technology	Digital Electronics	Robotics & Automated Systems	Engineering Practicum -and/or- AP Physics
Agriculture	Agribusiness	Agribusiness	Principles of Agribusiness	Organizational Leadership and Communications	Agricultural Business & Finance
			Supervised Agricultural Experience		

**Robust, Integrated Learning Approach**

- General Education Courses
- Lab Science Credit
- Personal Finance Credit
- Work-Based Learning Opportunities
- Early Postsecondary Opportunities (Dual Credit, Dual Enrollment, AP, etc)

TN

### COURSE DESCRIPTION DOCUMENT

#### Advanced Electromechanical Technology

**Course Description:** This course is designed for students who are interested in pursuing a career in the advanced manufacturing industry. The course covers the fundamentals of electromechanical systems, including electrical circuits, mechanical systems, and control systems. Students will learn to troubleshoot and repair complex systems, and will gain hands-on experience with a variety of tools and equipment.

**Program of Study Application:** This is the first course in the Electromechanical Technology program of study. For more information on the benefits and requirements of completing this program, visit the website at [www.tn.gov/education/cte/advanced-manufacturing](http://www.tn.gov/education/cte/advanced-manufacturing).

**Course Standards:**

**Learning Objectives:**

- Identify and explain the role of safety in the workplace, and demonstrate the use of safety equipment and procedures.
- Identify and explain the role of safety in the workplace, and demonstrate the use of safety equipment and procedures.
- Identify and explain the role of safety in the workplace, and demonstrate the use of safety equipment and procedures.

TN

### SHARING INFORMATION WITH STAKEHOLDERS

#### MACHINING TECHNOLOGY

**Advanced Manufacturing**

The Machining Technology program of study is designed for students interested in becoming a Computer Numerical Control (CNC) Machinist. This program includes safety, math, and science courses, as well as hands-on experience with CNC machines and computer-aided manufacturing (CAM) software. Students will learn to program and operate CNC machines, and will gain experience with the tools and equipment used in the industry.

**Dual Credit/Dual Enrollment/Industry Certification options include:**

- Machining (MACH)
- Manufacturing (MFG)
- Production Certification (PTC)

**Industry Certifications:**

- Advanced Manufacturing (AM)
- Computer Numerical Control (CNC)
- Manufacturing (MFG)
- Production Certification (PTC)

TN

### CAPSTONE EXPERIENCE OPPORTUNITIES

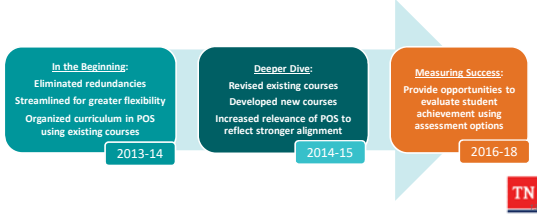
- Industry Certifications
- Work-Based Learning and Practicums
- Early Postsecondary Courses

TN Department of Education Career Forward Task Force




## MULTI-PHASED, MULTI-YEAR APPROACH

Phase	Goal	Implementation
Phase I	Streamline our existing courses and programs of study	2013-2014 SY
Phase II	Add relevant new courses and new programs of study, revise courses to align to higher student expectations	2014-2015 SY
Phase III	Measure success of students with rigorous assessment options for all courses	2016-2018 SY



## GOING FORWARD

- Shared CTE Programs of Study: High School – TCAT/ Community College
- Course/Student Assessment Opportunities: All Levels
- Continued Growth of Capstone Certifications
- Continued Growth in Early Postsecondary Credit Opportunities
- Continued Growth in Industry Partnerships and Work-Based Learning



## TENNESSEE'S MODEL FOR WORK-BASED LEARNING

Chelsea Parker, Exec Dir, Work-Based Learning and TN Council for CTE  
Blake Shearer, Coord. HS Interventions-Transitions

### WHAT IS WORK-BASED LEARNING (WBL)?

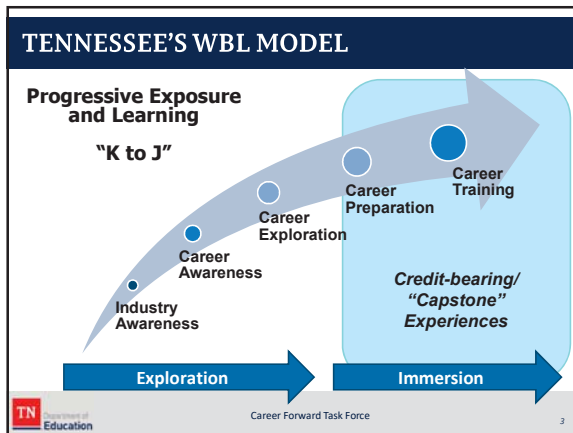
Work-based learning (WBL) is a proactive approach to bridging the gap between high school and high-demand, high-skill careers in Tennessee.

Students build on classroom-based instruction to develop employability skills that prepare them for success in postsecondary education and future careers.

WBL activities must:

- **Begin in elementary** and continue through postsecondary
- **Align with student interests**
- **Expose students** to professional work settings and expectations
- Provide students with **feedback on their work/performance** from industry professionals

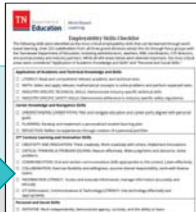
Career Forward Task Force



### TRANSFERABLE EMPLOYABILITY SKILLS

<b>Academic &amp; Technical Skills</b>	<ul style="list-style-type: none"> <li>• Literacy, Math, and Technical Skills</li> <li>• Workplace Safety</li> </ul>
<b>Career Knowledge &amp; Navigation Skills</b>	<ul style="list-style-type: none"> <li>• Understanding career paths</li> <li>• Planning and goal setting</li> <li>• Reflection</li> </ul>
<b>21<sup>st</sup> Century Learning &amp; Innovation Skills</b>	<ul style="list-style-type: none"> <li>• Creativity and innovation</li> <li>• Critical thinking and problem solving</li> <li>• Communication</li> <li>• Collaboration</li> <li>• Information literacy</li> <li>• ICT: technology literacy</li> </ul>
<b>Personal &amp; Social Skills</b>	<ul style="list-style-type: none"> <li>• Initiative</li> <li>• Professionalism, Ethics, and Interpersonal Skills</li> <li>• Cultural and global competence</li> <li>• Adaptability and flexibility</li> <li>• Productivity</li> </ul>

**Employability Skills Checklist**



Career Forward Task Force

### ENSURING A SUCCESSFUL WBL MODEL

**Approach Taken**

Statewide Assessment of Previous WBL (225 participants, including over 75 from industry)

2014-2015 Development and Pilot of NEW Policies and Standards

- Revisions to SBE Rules and Policies
- Revision to TDOE WBL Policy Manual
- Development of WBL-related Courses and Standards

2015-2016 Full Roll Out

Developed and Launched NEW PD

- WBL Leadership Council – Expert Practitioners/Trainers
- WBL 2-Day Certification Training – Offered in all Grand Divisions
- WBL PLCs – Promote continuous improvement in every CORE region, monthly

Spring 2016 Assess District Readiness for WBL

- All Means All approach to WBL course offerings
- Teachers are supported by appropriate PD
- 2016-17 WBL Portfolio Pilot

Career Forward Task Force

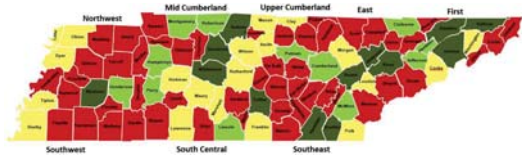
### ALL MEANS ALL IN WBL

**Tennessee's Vision for WBL:** "Every student in Tennessee will prepare for further education and long-term careers in an increasingly complex global economy by exploring careers, understanding their own skills and interests, and learning through hands-on application of valuable employability skills."

<b>WBL Readiness</b>	<b>WBL Readiness Indicators</b>
<b>"All Means All" WBL Course Offerings</b>	Districts offer a full suite of capstone WBL courses, making it available to all (course codes 6105 and 6107, but may also include other practicum courses)
<b>Teachers are Supported</b>	Teachers have attended BOTH the foundational WBL two-day training and have attended 4+ WBL PLCs in a given school year to support continuous improvement of their programs
<b>Districts Plan for Continuous Improvement</b>	Districts have a Continuous Improvement plan for WBL that addresses all identified key components of a WBL plan
<b>Students Demonstrate Growth</b>	Using multiple measures, students demonstrate growth in employability skills (use of pre- and post-assessments of employability skills) Portfolio rubric assessment shows student growth and meets benchmark attainment goals

Career Forward Task Force

## WBL READINESS BY DISTRICT



- District offers multiple capstone WBL options to all students
- District offers capstone WBL accessible to all students
- District offers multiple capstone options, but not available to all students
- District offers one or fewer capstone WBL options to only a portion of students

## EVALUATION METRICS

- IF quality WBL is grounded in district/school culture that supports career readiness for all students, and
- IF quality WBL is meaningful and progressive, allowing students to progress from an early age, then
- Quality WBL will be measurable by:
  - Pre- and Post- Experience/Exposure Assessments
  - Professional Development/Teacher Supports
  - Early Student Experiences – tracked/captured
  - Student Portfolios Demonstrating Student Growth
  - ROI and Industry Partner Participation Evaluations



The Tennessee Colleges of Applied Technology serve as the premier suppliers of workforce development throughout the State of Tennessee. The Colleges fulfill their mission by:

- Providing competency-based training through superior quality, traditional and distance learning instruction methods that qualify completers for employment and job advancement;
- Contributing to the economic and community development of the communities served by training and retraining employed workers;
- Ensuring that programs and services are economical and accessible to all residents of Tennessee; and
- Building relationships of trust with community, business, and industry leaders to supply highly skilled workers in areas of need.



There are 27 Tennessee Colleges of Applied Technology strategically located within a 50 mile radius of every Tennessee resident.



## Who We Serve

- TCATs train **30,000** students each year
- Approximately **10,000** full-time day students
- Approximately **10,000** Part-time students
- Approximately **10,000** Special Industry students



## Tennessee Colleges of Applied Technology (TCATs)

- 60 Occupational Program Options Statewide
- Program Length: 4 months – 2 years
- Open Entry/Open Exit
- Students Choose:
  - Program
  - Full-time Day or Evening Enrollment

**Completion:** 82.1% **Placement:** 87.1% **Licensure:** 94.3%



## Awards

- **Diploma** are awarded to students who successfully complete an occupational program which is at least one year in length.
- **Certificates** are awarded to students who successfully demonstrate competencies for a proficiency level in occupational programs less than one year in length.



## The Drive to 55

- Tennessee Promise
- Tennessee Reconnect
- Tennessee LEAP
- Dual Enrollment



## Tennessee Promise

### Fall 2015

2,136 Students Enrolled

### Spring 2016

2,022 Students Returned

95% Fall to Spring Retention Rate



## Tennessee Reconnect

### Fall 2015

4,921 Students Enrolled

### Spring 2016

4,479 Currently Enrolled

91% Fall to Spring Retention Rate



## Dual Enrollment

### Fall 2014

2,202 Dual Enrollment Students

### Fall 2015

3,307 Dual Enrollment Students

33% Fall to Fall Increase

45% Five year Increase



## Partnerships with Secondary CTE

### Early Postsecondary Initiatives

- Industry Certification Alignment
- Dual Enrollment Pilot Expansion
- Dual Credit Expansion

### Barriers

- Transportation
- Capacity
- Equipment
- Funding



## Strategic Initiatives

### New Student Information System

- Business Process Modeling
- Data Improvement and Sharing Opportunities

### Capacity Plan

- Campus /Program Expansions

### Program Review

- Length
- Alignment





For TCAT contact information, please visit:  
<https://www.tbr.edu/institutions/colleges-applied-technology>

## Contact

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# TENNESSEE COMMUNITY COLLEGES

Michael Tinsley  
Perkins Coordinator  
Tennessee Board of Regents



## COMPLETE COLLEGE TENNESSEE ACT AND THE DRIVE TO 55

- Reduce the cost to completion
- Reduce the time to completion
- Better aligned credentials with employer needs



## COMPLETE COLLEGE TENNESSEE ACT AND THE DRIVE TO 55

- A) Remediation Redesign
- B) Academic Alignment
- C) Structured Intervention



## COMPLETE COLLEGE TENNESSEE ACT AND THE DRIVE TO 55

### *Remediation Redesign*

- Seamless Alignment and Integrated Learning Support (SAILS)
- Co-Requisite mediation (remediation redesign)



## COMPLETE COLLEGE TENNESSEE ACT AND THE DRIVE TO 55

### *Academic Alignment*

- Tennessee Transfer Pathways (50 articulated pathways)
- Career Program Alignment
- Reverse Articulation



## COMPLETE COLLEGE TENNESSEE ACT AND THE DRIVE TO 55

### *Structured Intervention*

- Tennessee Promise
- Tennessee LEAP
- Intrusive Advising



### Community College Completion Facts

**PART-TIME vs FULL-TIME**  
 55% of CC students are part-time  
 A majority of community college students attend part-time, representing 55% of community students. It takes them longer to complete.

**COLLEGE READINESS**  
 60% of CC students unprepared  
 Community colleges are open access, meaning many students who are unprepared for college. According to research, at a community college, the like probability of Tennessee, only 40% of freshmen demonstrate learning readiness.

**SIX-YEAR GRADUATION RATES**  
 When the threshold is extended to six years, community college completion rates are considered low.  
**41%** of all students  
**62%** of full-time students

**94** Completion rate for certificate-seeking students.

**90** More than 90 percent of adult students graduate with learning transfer or credit mobility.

**93** Percentage of AA degree students who graduate with a transferable degree.





## Career Forward Taskforce Meeting Notes

Meeting April 22, 2016

### Welcome by Commissioner of Education Candice McQueen

Reminder of the goals and recap of the last meeting:

- Charge of the task force: examine and explore ways to better engage students in their academic preparations, personal and social development, and workforce readiness; and identify overarching principals leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.
- The three questions the task force will be working to answer are:
  1. How do we know when a student is “career ready” at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
  2. How do we ensure that students are progressing along a directed learning pathway aligned with the state’s economic needs and employer needs at the secondary and postsecondary levels?
  3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

From the last meeting task force members reflected that the issues of choice and how students make decisions, the role of counselors, the importance of defining college and career in other states, setting up a system to incentivize the skills we want students to have, the interaction between K-12 and higher education in preparing students, TNPromise mentoring giving a firsthand insight into the lack of first generation student knowledge around postsecondary, and the indicators we have to help show readiness such as chronic absenteeism stuck with them as important takeaways.

In May we will be diving into defining the “Ready Student,” review of Early Postsecondary, and discussing student transitions, Pathways TN, the role of Certain Adult Stakeholders (e.g. counselors), and ACT WorkKeys.

### Federal Education and Workforce Development Policies: Weaving together WIOA, ESSA, and Perkins presentation by Steve Voyteck, Government Relations Manager

- Workforce Innovation Opportunity Act (WIOA)
  - 2014 signed into law replaced the Workforce Investment Act
  - The goal of WIOA is to consolidate programs and align of federal workforce education programs
  - Four main titles:
    - Title I: Workforce Development Activities- for youth, adult, and dislocated workers

- Title III: Wagner-Peyser Act (Employment Services)
- Title IV: Rehabilitation Act of 1972 (Vocational Rehabilitation)
- WIOA key changes/themes:
  - Introduction of 5 key common performance metrics
  - Career pathways and sector strategies
    - Sector strategies bringing together sectors to share ideas and improve outcomes
  - In demand- prioritized from investment standpoint
  - The goal is economic self-sufficiency
  - Changes to the youth funding measures
    - 75% must be used for out-of-school youth (defined as ages 16-24)
    - 20% on WBL experiences, internships, or subsidized employment during the summer
- Every Student Succeeds Act (ESSA)
  - Replaces No Child Left Behind
  - The focus is on local and state autonomy and flexibility in the law's implementation.
  - Meant to improve and strengthen student achievement, focus on high needs school districts
  - States must establish "challenging standards," continues idea of standards based reform, and annual assessments in grades 3-8 and once in high school
  - Within ESSA it is allowable to have innovative assessment pilots which could include competency based assessments
  - States must have long term goals, accountability systems with five metrics, methodology for identifying and supporting low performing skills and publically reporting data.
  - ESSA overlap with WIOA and Perkins includes:
    - State and local plan coordination
    - The focus on "Well-rounded education"
    - All ESSA plans must coordinate with Perkins and activities in the workforce opportunity action
    - Intentionality around funding and connection points
    - Standards must be aligned with CTE and postsecondary entrance points
    - Emphasizing credential attainment
- Carl D. Perkins Career and Technical Education Act (Perkins)
  - Perkins is the sole federal investment in CTE and sets expectations for CTE across the country
  - Overarching purpose:
    - Program investment/scalability
    - Systems alignment
    - Be a bridge builder between ESSA and WIOA
  - Defining themes: integrated academics in technical coursework, accountability and improvement, links to business and industry, secondary-postsecondary connections, linkages to other programs (WIA/WIOA, ESEA/ESSA, and HEA)

- Weaving this all together
  - The order in which the federal acts were reauthorized shows a patten and a flow of ideas. WIOA followed by ESSA followed by Perkins followed by HEA (Higher Education Act)
- Where is federal policy going from here?
  - Postsecondary education is a necessity not a luxury
  - Systems alignment- intentionality in linking programs. Part of achieving this will be through states planning accountability. Performance private partnerships can also be involved.
  - Focusing on outcomes not inputs- incentivize desired outcomes
- Higher Education Act
  - Builds upon interest and ESSA and expanding early college high schools
    - Key point student transitions
    - If a student is exposed to postsecondary earlier that increases the likelihood of going on and persevering

### Group Discussion

Questions:

- 1) Understanding the expectations of WIOA, ESSA, and Perkins, which specific directives and/or funding purposes stood out to you most? And why?
- 2) How could these federal acts be utilized/leveraged in a coordinated fashion by the state in order to drive more purposeful postsecondary and career readiness of its citizenry? Initial thoughts on how it could come about or even if it should?

Group 1	Group 2
<p>1) It is good that there are clear, definable goals and how to specifically understand what the expectations are. We are concerned with additional accountability and how those will be measured. It is interesting that there is a shift to focus on out of school youth and the impact that will have on within school initiatives in place.</p> <p>2) Developing a regional and common goal is critical to make these all work together. We need to break out from just the LEA boundaries and define common goals with groups of different stakeholders. How do we move away from talking about inputs, and moving to outputs and outcomes? The language that is coming from industry is different from education, so bringing those sides together is critical. There is so much value in talking.</p>	<p>1) A common theme is a focus on outcomes of goals versus outcomes of siloed funding streams. With increased alignment we need to make sure that gaps don't perpetuate through all the programs. It stood out that the purpose of funding being for enhancing engagement for hands on experiences.</p> <p>2) We are already doing well in utilizing spaces and maximizing spaces in community. For example: Oakland high school opens its doors to mechatronics adult populations in the afternoon. We should not have to duplicate programs. The dollars saved can be shifted for transportation, daycare expenses. How do we promote that on the state scale? We need to have common metrics across the required laws to identify the barriers and react proactively.</p>

Group 3	Group 4
<p>As a state we need to work on providing guidance through ePlan and drive home how to put ideas together at the district level. Kathleen Airhart and Ann Thompson will work on tracking where the dollars are going. We also need to be thinking about “how do we get the dollars to teachers?” We should be taking advantage of WorkKeys to make sure that students are better prepared for work. Better spending of funding/planning between funding streams. Stop thinking in silos and don’t use funds in isolation. We need to pull external programs into school planning. We need guidance documents for districts. We need to understand where all the dollars are going- map it!</p>	<p>Work between TBR and TDOE is already happening Focus on outcomes is important over focus on input. Employment is a measure of success and ultimately economic prosperity. Two key levers need to be involved: industry expectations and sharing the knowledge that dollars are available. Incentives for counselors and capacity for counselor to help be the strong gatekeepers</p>

**State Economic and Workforce Development presentation by Ann Thompson, Director of Workforce Development at the TN Department of Economic and Community Development**

- TNECD
  - ECD does business development (new industry recruitment, existing industry expansion, and entrepreneurs). The work is 75% expansion and 25% recruitment
  - There are ECD 9 regions with a decentralized structure
  - The project management team works on supporting and bringing industry into Tennessee, with a huge amount of work on automotive
  - The other main initiatives are rural development and education alignment
- Focused on foreign and national direct investment, we are not just competing in TN we are globally competing
- Business climate
  - As a state we have a strong business climate with 130 + state parks and natural areas, 2<sup>nd</sup> lowest cost of living and 30.3% below the national average of housing pricing
- Tennessee was the first ever back to back state for economic development, which had never happened before
- Enhanced job tax credit- new program
  - Putting dollars towards industry moving into Tier II and Tier III communities
- Drive to 55 results: 80.8% retention at community colleges and 95% at TCATs
- Workforce 360: Collaborative between labor, 2-year, 4-year, business and veterans. The value added is in having everyone at the table at one time to make a decision.
- Center for Economic Research is a resource for the state

- Looking at age demographics of the current workforce, there are a huge number of people about to retire, “the grey wave,” without the current workforce to fill it in
- 2015 annual LEAP report: designed to ensure that postsecondary institutions are producing the skills and credentials that Tennessee employers actually need through alignment of education and industry.
- Disruption index- half of jobs in TN will be effected by automation- not going away but will need higher education to work there

### **“A Job Cures Many Ills” presentation by Commissioner Phillips, Department of Labor and Workforce Development**

- Department of Labor and Workforce Development
  - 60% of funds go to education and workforce development
  - Funds training in TCATS, state universities, community colleges, business and industries
  - Return on investment is \$1 generates \$38-\$58 dollars in wages and \$7.85 in taxes
  - Goals are to increase employment rate and implement WIOA
- Continual Learning
  - We want a strategy supply of high skilled workers but also want to have the capacity for innovation driven by a plentiful workforce at ALL levels
  - 80% of technology now in use will be obsolete in 10 years
  - TN has had huge increases in employment but there are still industry says they can’t find skilled workforce
- By 2020, only 20% of the labor force will come from U.S schools, 80% will be people who are already in the workforce
- Providing Innovative Viable Opportunities for Training- PIVOT
  - The goal is to talk to business as they can tell us what is needed
  - Example program: Toshiba 2-year program with Jackson State Community College. Students are paid and at school. Businesses provide training and equipment. Graduating students are working as advanced maintenance technicians (\$25/hour)
  - Example program: Lee University- accredited training site with Lipscomb University and TDOE. Employees can attend Lee and earn hours towards an applied science degree
- We have to look towards existing workforce, can’t get there only looking to students.

### **Employer Panel**

Panelists: Commissioner Phillips, Ann Thompson, Jeff Frazier Director of Eastman Chemical/RCAM, and Cal Wray, Executive Director Clarksville-Montgomery County EDC

- 1) What should be or can be the role of the employer and chamber of commerce in framing the optimal environment in order to obtain a workforce?
  - Jeff: Easy for business partners to be critical. Let’s talk about what we can do to make things better. It’s easy to point a finger. How can we be a partner? How can business join education?

- Cal: Chamber has a big umbrella, it can hit a spectrum of employers ranging from small business, hotelier, and industry. For so many years there was a disconnect in communications between business and education. We can bring a lot of people to the table and have a conversation.
- 2) Barriers, perceived or real, exist on both sides. When you think about the barriers, what are you seeing or hearing in terms of having that education to career pipeline / pathway?
  - Jeff: Everything is changing, tech is changing. How can we design a curriculum when things are moving so fast? A barrier is that there isn't enough time. Malcolm Gladwell argues in order to master something it takes 10,000 hours. It takes time to become immersed in technology or a career pathway to become competent.
  - Cal: Manufacturing today is not the same as how it used to be, and people are having trouble shifting their perceptions. TCATs are coming back.
- 3) Business are saying "I don't know how to get involved, I can't take those kids because of age." They are saying I can only give you this much exposure, but we can't start at grade 13 to expose, as that's too late. There is a strange tension. How are you think thinking though the tension?
  - Jeff: Companies will be forced into thinking through having clear objectives on how they have train employees. Eastman has apprenticeship program. We need solid knowledge transfer programs, especially with the new technology.
  - Cal: More companies are interested in internships/apprenticeships and realizing students don't have to be 18. We need to be exposing students in 6<sup>th</sup> grade, and unless we do that we won't have enough time.
  - Commissioner Phillips: A barrier is student awareness and the outcomes of their choices. Think about the examples from my presentation, Lee University and Toshiba working with Jackson State. Programs like that has to be done more and more and then pushed down to lower grades.
  - Ann: Businesses can take classes if they can't have students on the floor. Metal stamping is a great example of trying to find where you can bring students in while making sure to work with the OSHA standards.
  - Jeff: There have been cases of multiple employers in a high school physics class, bring the industry to the schools using employer volunteers. Dual enrollment is a huge opportunity.
- 4) If you could create an education to career pathway, what would that look like? What existing models would inspire you?
  - Jeff: Switzerland as a model with their instructor involvement in education. If we work together we will figure this out.
  - Ann: German model is important to look to in getting students to roll towards something. Their system has no wrong way in or out. TN has got to figure out a way to take this to scale. It has got to be standardized to some extent so we can get around policy issues.
  - Cal: German apprenticeship model. We can't train on a case by case basis, we need to give employees mobility with a base set of skills and then those skills can be customized.
  - Commissioner Phillips: Industry now is the time to get involved. Unemployment rate is low. There needs to be a standardized base with foundational skills.

### **Secondary CTE in Tennessee presentation by Candi Norwood, Director of Student Success**

- CTE has four major units: Student Success, Talent Improvement, Student Leadership, and Work-Based Learning. Today's presentation is going to focus on Student Success.
- Historically CTE has been strictly skills-based, and the programs of study did not match regional opportunities with a minimal focus on postsecondary opportunities.
- In today's society careers are now no longer linear, there are no jobs that focus solely on skills or academics.
- CTE today involves a seamless transition model:
  - Start in elementary and middle school - awareness, high school
  - Active industry involvement starting in the early grades
  - Educate students on what their future looks like and having the support systems in place.
  - Ability to earn postsecondary credits or industry certifications in high school
  - Seamless transition for secondary to postsecondary
  - Multiple entry and exit points for 12-16
  - Opportunities for regional relevance
- CTE Career Clusters
  - Regionally chosen due to workforce development needs
  - 16 career clusters, 59 programs of study with 179 high school course offerings
    - Each POS has four levels of courses including WBL
    - Concentrator has 3 or more classes in a program of study
    - Lots of dual credit/dual enrollment opportunities
- There is a career cluster document created to share with stakeholders what is available within each program of study.
- We are currently in Phase III of CTE, measuring success of students with rigorous assessment options for all courses. Phase I was streamline our existing courses and programs of study and Phase II was to add relevant new courses and new programs of study, revise courses to align to higher student expectations.
- Going forward
  - Partnerships with TCATs, hope to have alignment with industry certifications.
  - Assessment opportunities at all levels.

### **Postsecondary CTE in TN presentation by Chelle Travis, Assistant Vice Chancellor of Student Services, Office of TCAT, TBR**

- The goal of TCATs is to provide quality technical education that is accessible and affordable and that the workforce development that meets the need of businesses.
- There are 27 TCATS, which are located within a 50 mile radius of every Tennessean
- TCAT's serve 30,000 students a year in 60 occupation programs statewide ranging in length from 4 months to 2 years.
- TCATs are open entry/open exit- students can exit once they have gained those competencies.
- 82.1% completion 87% placement in their chosen field 94.3% licensure
- Terms: Certificate (less than 1 year) and diploma program (1 year or longer)

- Drive to 55 (TNPromise) and LEAP has helped with marketing
  - 94.7% fall to spring retention rate and served 2,100 students
  - Dual enrollment has seen huge increase in students (33% increase)
    - The legislation changed so that students now get two free courses before it was \$300 towards courses
- Partnerships with Early Postsecondary Opportunities (EPSOs)
  - Industry certification
  - Dual enrollment pilot expansion
  - Dual credit expansion
  - Barriers: transportation, capacity, equipment, funding
- TCATs are working on new student information systems and a new business process modeling across TCATs to create common processes, which allows for better data

### **Tennessee Community Colleges presentation by Michael Tinsley, Perkins Coordinator, TBR**

- The Complete College Tennessee Act and Drive to 55 are striving to reduce the cost to completion, reduce time to completion, and align credentials with employer needs.
- Remediation redesign:
  - SAILS- Postsecondary in secondary world (helping to get students below a 19 ready for math)
  - Co-requisite- before only 5% of students who entered as remedial students persisted
    - Take college math class and foundational basics at the same time as credit bearing course
    - Changing success rates
- Academic alignment redesign:
  - TN transfer pathways
  - Career program alignment
  - Reverse articulation- credit for work that has been done
- Structured interventions
  - TN Promise
  - TN LEAP
  - Intrusive advising
- Community College completion facts:
  - 94% certificate seeking students
  - 93% of students who get an AAS are placed in 6 months

### **Tennessee's Model for Work-Based Learning (WBL) presentation by Chelsea Parker, Executive Director of Work-Based Learning and Blake Shearer, Coordinator High School Interventions and Transitions**

- The goal of work-based learning is to provide opportunities for career awareness in addition to allowing student to work alongside industry and apply what they are learning in the classroom in a workplace, and to provide the company with value.
- WBL model:
  - Progressive exposure and experience model. K-J (Kindergarten-to-Jobs) model



- Industry and career awareness has to happen early. Career exploration is students participating in job shadows, interviews, and competitions to help them explore interests that best fit them. Capstone level work is more long term paid work experiences, coops, and apprenticeships.
- TDOE has worked hard to set a foundation. This started with statewide assessment of need, as well as revision of the WBL framework, standards, and training model. This year we have been implementing a full statewide roll out have trained 840 teachers.
  - There is a WBL Leadership Council that provides training and shares best practices
- All means all focus:
  - No harm in assuming all students should be competitively employed
  - WIOA has helped in supporting integration of students with disability in WBL experiences
  - Sheltered workshops are shutting down. Districts are providing courses for students to get intro knowledge and skills for WBL and supporting teachers with PLCs.
- Baseline map of WBL:
  - 10,500 students participated in capstone WBL experiences with 500 teachers. Huge demand. Trained 850 teachers this year.
  - Readiness by district varies greatly.
- The next steps are to track the breadth and depth of student experiences. We are working on pre- and post- assessments and preparing a culture of career readiness. School climate indicators will help to see if students are being prepared. We need to better track the early experiences. We all need to measure the return on investment for industry partners and for the broader impact.

### **Postsecondary and Secondary Panel**

Panelists: Candi Norwood, Chelsea Parker, Blake Shearer, Chelle Travis and Michael Tinsley

Can working on the school yearbook be viewed as WBL?

- There are strong models of school-based enterprise, and students run that. Yearbook can be strong when it's treated as a business model (e.g., includes fundraising and other business practices), or it can be a superficial experience, which we would not promote. You have to be careful about identifying that.

Is the state doing anything to solve the transportation problem?

- Funding is at the local level. Dual enrollment has been brought to the campus. Five community colleges have middle colleges (For example: Pellissippi State)

What are the barriers?

- Funding sources. For example: Perkins- all those plans needs to be a regional unified plans. CTE directors are working on their Perkins funding plans are separate from school improvement grant and other planning/funding sources. It should be a regional or unified experience.
- Parents of students with disabilities push back with misconceptions "I don't want my children to work as they are going to lose their benefits." We need to make sure that parents understand the reality. 83% of families want their student with disabilities to be in employment.

- Educators don't understand their connection to the industries.

### Group Discussion

Questions:

- 1) What salient points stood out to you from the State and Employer Session? And why?
- 2) What stood out to you from the Secondary and Postsecondary session? And why?
- 3) Discuss *Meandering Toward Graduation*. What did you flag/underline and why?

Group 1	Group 2
<p>We want to make sure we are strategic and forward thinking in our plans. What will it look like in 10 years? How can we provide foundational elements to help teachers be prepared?</p> <p>A barrier is student awareness of opportunities. Use TN Promise idea of mentors 1:1. Connect mentors to help students to know what they will need in the workforce (and start it in the early grades.)</p> <p>TN Promise was the big idea and the message was simple and increased awareness. Can we do the same thing with early workforce. The mentoring component was HUGE, use the model for career and college pathways.</p>	<p>A barrier is transportation and limited access. School buses could teach courses while on route. Equipment should be mobile but with a systematic integration to curriculum not an add on.</p> <p>We need to leverage the summer break for WBL experiences.</p>
Group 3	Group 4
<p>How can we ensure students are ready and businesses know they are ready? We should have all juniors take WorkKeys and ACT, and have it on the diploma. Use Title I funds. We should utilize ECD and labor to get businesses in front of schools and then lean on Community Colleges and TCATs to offer aligned courses.</p>	<p>School culture is important in supporting soft skills. There should be CCR indicators that are reported. There should be high school level accountability for college and career readiness indicators.</p> <p>We need to make sure we are getting resources like jobs for TN into teachers and counselors hands and embedding it into trainings.</p>

### Closing from Commissioner McQueen

- Thank you for your time and for engaging in today's rigorous conversations.
- Reflection from today's session to carry forward to next time:
  - Counselors role
  - Transportation as a barrier as something we need to consider regionally and statewide
  - How to connect high school experience with postsecondary
  - Soft skills- how are we defining it? How do we make sure it's just not a school responsibility?
  - Idea of equipment on wheels
  - Statewide data only 2% of high school students go directly into a TCAT

- We have the right people at the table, and that is very encouraging, but we need more academic teachers at the table. It is encouraging to hear about the willingness of the business community, there is a facilitation piece that needs to be thought through (matchmaking)
- For the final report recommendation categories are starting to emerge: state, higher education, local community districts, and businesses. In the report we need to be cognizant “are we incentivizing the right behaviors” and how do we respect the local nature and differences in education.



To: Members of the Career Forward Taskforce

From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education

Date: May 3, 2016

**Subject: Follow-up from meeting on April 22, 2016**

### **Meeting Overview**

The second meeting of the Career Forward Task Force was held on April 22, 2016, at the First Amendment Center in Nashville, Tennessee. The purpose of the meeting was to (1) learn about recent federal activity and acts, focusing on WIOA, ESSA, and Perkins; (2) discuss how these federal acts can be utilized/leveraged to drive more purposeful postsecondary and career readiness; (3) examine state economic and workforce development; (4) understand the current state of Tennessee's secondary and postsecondary career and technical education and work-based learning; and (5) discuss salient points from the day and how they can help to drive the forward facing recommendation.

The meeting began with opening remarks from Commissioner Candice McQueen. Commissioner McQueen reviewed the charge of the taskforce to "examine and explore ways to better engage students in their academic preparations, personal and social development, and workforce readiness; and identify overarching principals leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education."

Task force members reflected on salient points from the last meeting including the role of counselors and the interaction between K-12 and higher education in helping to prepare students. Commissioner McQueen outlined the future discussions of the task force. In May the focus will be on a deep dive into defining the "Ready Student."

### **Education and Workforce: Recent Federal Activity and Acts**

Steve Voytek, Government Relations Manager, provided an overview and discussion of the connections between the Workforce Innovation Opportunity Act (WIOA), Every Student Succeeds Act (ESSA), and Carl Perkins Career and Technical Education Act (Perkins).

The goal of WIOA is to consolidate programs and align federal workforce programs and it does this through the administration of four major titles. WIOA shifts from the previous workforce act in that it introduces common key performance metrics, requires that 75 percent of youth funding must be spent on out of school youth ages 16-24, and prioritizes sector communication on common outcomes.

The goal of ESSA is to improve and strengthen student achievement. ESSA replaces No Child Left Behind but keeps the major tenet of challenging standards. ESSA prioritizes state and local autonomy and flexibility in the law's implementation. ESSA overlaps with WIOA and Perkins in the focus on a "well-rounded" education, and the importance of coordination.

Perkins' overarching purpose is to provide CTE program investment/scalability, systems and alignment, and bridge ESSA and WIOA. Perkins is the sole federal investment in CTE and sets expectations for CTE across the country.

Federal policy is shifting to the stance that postsecondary education is a necessity and not a luxury, and stressing the importance of overlap and using funds wisely across different avenues to maximize its potential benefits.

### **Group Discussion of the Federal Acts**

Members of the task force were asked to reflect on the federal acts and how they can be utilized/leveraged to drive purposeful postsecondary and career readiness. Across the groups the importance of collaboration and integration across sectors was mentioned repeatedly. The more we can work together the greater number of people can be supported and the more wisely money can be allocated. The shift to a priority on spending WIOA funds on out of school youth resonated with groups as being a potential challenge as we also need to be thinking about supporting our in-school youth.

### **State and Economic Workforce Development Presentation**

Ann Thompson, Director of Workforce Development, provided an overview of the Tennessee Department of Economy and Community Development (ECD). ECD supports business development including new industry recruitment, existing industry expansion, and entrepreneurs. As a state we have a strong business climate, receiving the accolade of being the first ever state to be the first ranked state in economic development two years in a row. Given that over half of the jobs in Tennessee will be affected by automation, requiring employees with higher degrees and credentials, we need to be strategic in how we are supporting business, and we have already begun with initiatives such as Drive to 55 and Workforce 360.

Burns Phillips, Commissioner of Labor and Workforce Development, provided an overview of the Department of Labor and Workforce Development. Sixty percent of funding goes towards education and workforce development with a return on investment of \$38-58 in wages and \$7.85 in taxes for every \$1 invested. By 2020 only 20 percent of the labor force will come from schools, the rest will be from existing the existing workforce so it is imperative that businesses have a strong internal training and support plan.

### **Employer Panel**

Jeff Frazier, Director Eastman Chemical/RCAM and Cal Wray, Executive Director of Clarksville-Montgomery County EDC joined Ann Thompson and Commissioner Phillips to answer questions on the employer perspective. Panelists stressed the importance of communication and alignment to make sure that education is helping to prepare students for today's workforce. Switzerland and Germany were mentioned as countries that have a strong system of business and education alignment that we could look towards.

### **Secondary and Postsecondary in CTE**

Candi Norwood, Director of Student Success, presented on CTE in Tennessee. CTE has shifted dramatically from being a skills-based program for non-college bound students to a seamless transition model. The model starts with career awareness in elementary school and grows to multiple entry and exit points for grades 12-16. The sixteen career clusters provide students with an opportunity to dig dipper into a program of study aligned with regional workforce needs.



Chelle Travis, Assistant Vice Chancellor of TCAT Student Services at Tennessee Board of Regents, provided an overview of the Tennessee Colleges of Applied Technology (TCATs). The goal of TCATs is to provide a quality technical education that is accessible and affordable and that the workforce development meeting the needs of businesses. There are 27 TCATs that serve 30,000 students a year in 60 occupations. Students can earn a certificate or a diploma with the option of multiple entry and exit points. TCAT's had a 94.7 percent retention of TNPromise students from fall to spring semester and has also seen a dramatic increase in the number of students participating in dual enrollment.

Michael Tinsley, Perkins Coordinator at TBR, presented on the Tennessee Community Colleges. There are currently three major initiatives underway to help support students in community colleges (1) remediation redesign, (2) academic alignment redesign, and (3) structured interventions. The remediation redesign is helping to increase the number of students who persist past remedial courses and gain college credit.

Chelsea Parker, Executive Director of Work-Based Learning, and Blake Shearer, Coordinator of High School Interventions and Transitions, jointly presented on Tennessee's model for work-based learning. The goal of work-based learning is to provide career awareness and exploration in addition to allowing students to work alongside industry and apply what they are learning in the classroom to a workplace, and to provide the company with value. Tennessee has worked hard to lay a strong foundation for work-based learning and this year rolled out a statewide training for teachers. Work-based learning is inclusive of all students, as students with disabilities are capable of being prepared for the work force.

### **Postsecondary and Secondary Panel**

Candi Norwood, Chelsea Parker, Blake Shearer, Chelle Travis, and Michael Tinsley answered questions from the task force about secondary and postsecondary CTE. Barriers to CTE included how to ensure alignment of the different funding sources, and parent and educator misconceptions about today's workforce.

### **Group Discussion**

The task force broke into groups to discuss their thoughts on today's salient points and stand out elements from the pre-reading *Meandering Toward Graduation*. For some groups the conversations of barriers continued with discussions of travel, awareness of opportunities, and limited student access. Additional groups discussed the possibility of mentorship, building culture within schools, and getting resources into the hands of teachers.

### **Next Meeting Information**

We will meet again Wednesday May, 25 at the First Amendment Center to continue our discussion on postsecondary and career readiness. For additional information on the meeting please see the attached meeting notes document.

Thank you for your participation in the April meeting of the Career Forward Task Force. Please feel free to contact [Melissa.Canney@tn.gov](mailto:Melissa.Canney@tn.gov) with any questions you may have.



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## The Every Student Succeeds Act (ESSA)

## Intersections and Opportunities for Career Technical Education

The Elementary and Secondary Education Act (ESEA) is the primary federal law governing most national elementary and secondary education programs. Originally passed in 1965, ESEA was last reauthorized in 2001 as the No Child Left Behind Act (NCLB). In 2007, NCLB's authorization expired and the law had been due for renewal since that time.

In 2015, Congress successfully passed the Every Student Succeeds Act (ESSA), which reauthorizes the law through 2020. The new ESEA legislation seeks to remedy many common criticisms of NCLB, particularly the federal government's expanded role in K-12 education under NCLB, by providing states and local school districts with significant flexibility regarding how to implement the elements of the new legislation while also significantly reducing the federal footprint in the nation's schools.

ESSA's emphasis on state and local autonomy will provide many opportunities for innovation and experimentation in the K-12 education environment, particularly with regards to Career Technical Education (CTE). While there are many provisions in ESSA that hold promise for the CTE community, it will be incumbent upon states to implement the law in such a way that fully leverages the potential of CTE.

Below is an analysis of the new law with a particular emphasis on these points of opportunity for the CTE community. Please note that all citations, unless otherwise specified, correspond to the enrolled version of ESSA, which can be accessed [here](#).

### Timeline for Implementation

Many of ESSA's provisions became effective on December 17, 2015 — the day ESSA was signed into law. However, given that most ESSA programs are forward-funded (i.e. provided in advance), the most recent Fiscal Year (FY) 2016 appropriations legislation superseded some of the law's embedded timelines.

It is important to note that many of the legislation's "big" pieces, such as new the state ESSA accountability systems and plans, are required to go into full effect at the start of the 2017-18 school year.<sup>1</sup> Another important deadline states should be aware of is August 1, 2016 — the day existing state ESEA waivers will expire.<sup>2</sup>

At present, it is not clear when states' ESSA plans will officially be due for submission to the U.S. Department of Education (USDE) for approval. The federal rulemaking process, which will likely begin in late spring 2016, will make that deadline clearer. Given that states' new accountability systems for ESSA must be operational by the 2017-18 school year, Advance CTE anticipates the deadline for state ESSA plan submission to be sometime in 2017, following the federal rulemaking process.

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<sup>1</sup> Sec. 5(e)(1)(B)

<sup>2</sup> Sec. 4(c)



## Limits on the Role of the U.S. Secretary of Education

A recurrent theme throughout ESSA is a regression of the federal role in K-12 education. The new law contains a number of provisions that will significantly limit the U.S. Secretary of Education's responsibilities and authority with regards to the implementation of ESSA. As a result, the Secretary is prohibited from requiring the following as a condition for approving a state plan or waiver (Note: this list is not exhaustive):<sup>3</sup>

- Requiring states to add new / additional requirements to the state plan;
- Requiring states to add or delete specific elements to their standards;
- Prescribing specific assessments or items to be used in assessments;
- Prescribing specific goals for state progress under their new accountability system
- Prescribing specific accountability indicators that states must use;
- Prescribing the weight a state's accountability measures should have;
- Prescribing a specific methodology that states must use to differentiate and identify low-performing schools; and
- Prescribing school improvement strategies or exit criteria.

The Secretary is also strictly prohibited from issuing new non-regulatory guidance that could be construed as falling beyond the scope of the requirements contained in Title I of ESSA.<sup>4</sup> The law also prevents USDE from developing non-regulatory guidance that, "purports to be legally binding," or that requires additional data collection beyond existing federal, state, and local reporting requirements.<sup>5</sup>

## ESSA: A General Provision of Note

**Four-Year Authorization Period:** ESSA authorizes programs for four years in total, rather than a longer period of time that is much more common for reauthorization efforts of this size.<sup>6</sup> This decision was made intentionally to allow the next president to revisit the law if they would like to.

**Specific Authorization Levels:** ESSA prescribes specific authorization levels for each of the Titles contained in the new law. It is important to note that these funding levels are merely suggestions from the law's authors. Congressional appropriators must ultimately decide how much each of these sections of the law receives through the annual budget and appropriation process in Congress. As a result, Congressional appropriators may choose to ignore these authorization levels and appropriate funds at a higher or lower level than those suggested in the statute.

**Title I-Part A:** Maintains same basic architecture for Title I aid and makes no changes to underlying formula determining state allocations. Grants made under this section of the law will continue to flow to local school districts serving high numbers and percentages of students from low-income families.

**Standards:** Maintains NCLB approach of standards-based reform by requiring states to establish "challenging" academic standards in English / Language Arts (ELA), Mathematics and Science. The USDE

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<sup>3</sup> Sec. 1111(e)

<sup>4</sup> Sec. 1111(e)(1)(A)

<sup>5</sup> Sec. 1111(e)(1)(C)

<sup>6</sup> Sec. 1002

is expressly prohibited from developing these standards or encouraging their development monetarily or otherwise.

**Assessments:** Maintains requirements for annual assessments in ELA, Mathematics and Science in grades 3 through 8 and at least once in high school.

**Accountability:** ESSA repeals NCLB’s “Adequate Yearly Progress” (AYP) provisions with a state-defined accountability system based on “multiple measures,” each disaggregated by student subgroups:<sup>7</sup>

- Annual assessments in subjects noted above;<sup>8</sup>
- High school graduation rates;
- Another “academic” indicator for elementary and middle schools;
- English language proficiency for ELL students; and
- At least one indicator of “school quality or student success”.

**School Interventions:** Starting in the 2017-18 school year, states must identify and intervene in the lowest-performing 5 percent of schools.<sup>9</sup> While earlier versions of ESSA proposed specific school-wide intervention strategies for states, the final version forgoes this type of prescriptive guidance in favor of maximum flexibility for states in the identification and intervention processes (see also: *Limitations on the Role of the U.S. Secretary of Education*).<sup>10</sup> As such states have the ability to incorporate CTE into their turnaround strategies for schools and districts if they choose to do so. However, this decision will ultimately be left to the SEA’s discretion and ESSA makes clear that states, not federal law or USDE, will determine how to turn around low-performing schools.

**Public Accountability:** ESSA maintains the requirement that states and school districts publish report cards that make publicly available information related to the state’s accountability system and a host of other important information.<sup>11</sup>

**Program Consolidation:** ESSA consolidates or eliminates 49 existing programs into a new block grant called “Student Support and Academic Enrichment Grants”.<sup>12</sup> More information related to these grants and funding opportunities for CTE can be found in the Title IV section of this document.

**Maintenance of Effort (MOE):** ESSA maintains the current 90 percent MOE requirement, but strengthens the process for states to waive this requirement in exceptional circumstances (such as a natural disaster or a change in the organizational structure of the state) and gives states a transition period of one year for meeting this requirement if it has done so in the previous five years.<sup>13</sup>

**Supplement, not Supplant (SnS):** ESSA broadly maintains this requirement, but will now only require states to demonstrate compliance every two years rather than annually. Further, states and local districts will have additional flexibility when having to demonstrate that individual costs are

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<sup>7</sup> Sec. 1111(c)

<sup>8</sup> Sec. 1111(c)(C)(ii). *It is important to note that this measure must be weighted substantially higher than all other indicators in a state’s accountability system.*

<sup>9</sup> Sec. 1111(c)(4)(D)

<sup>10</sup> Sec. 1111(d)

<sup>11</sup> Sec. 1111(h)(1) & Sec. 1111(h)(2)

<sup>12</sup> Sec. 4101

<sup>13</sup> Sec. 8019

supplemental.<sup>14</sup> This is an area of the law that USDE will likely develop regulations for in the coming year.

## CTE Opportunities: Title I

**Standards Alignment:** States **must** demonstrate in their state plans that their “challenging academic standards” are aligned with state CTE standards. Further, states must align these standards to the entrance requirements for credit-bearing coursework for higher education in the state.<sup>15</sup>

**Well-rounded Education:** A main point of emphasis in ESSA is ensuring that every student receives a “Well-rounded Education” (formerly known as core academic subjects). CTE is now included as part of the statutory definition for a “Well-rounded Education”.<sup>16</sup> CTE’s inclusion in this definition will open up new opportunities for states and LEAs to use ESSA funding for CTE programs and activities. However, the extent to which this will be realized is largely up to the discretion of those entities and is also contingent on what portions of the new law the definition is being used.

**State Planning Coordination:** State ESSA plans **must** be developed in coordination with the state’s Carl D. Perkins Act (Perkins) plan and, at the local level, applications must be submitted in coordination with a local Perkins plan, as appropriate.<sup>17</sup>

**Accountability:** ESSA provides states with broad authority for how to develop and implement their new K-12 accountability systems. Five measures are required as noted above but only four are defined in the new law. The fifth accountability metric must be a measure of “school quality or student success”. States are responsible for determining what this metric will be.<sup>18</sup> ESSA provides a few suggestions for states to use such as measures of postsecondary readiness or student access to advanced coursework. However as with most of ESSA, states must ultimately determine what this measure will be, and it must be both objective and allow for meaningful comparisons among schools and districts within a state. It is important to note that with this new flexibility states have a greater ability than before to promote college and career readiness among their students via their accountability systems. As such, this fifth metric should be looked to as a key opportunity during the law’s implementation to embed CTE / career readiness measures within the state’s accountability system. [Read more on these efforts here.](#)

**Dual / Concurrent Enrollment Programs:** For the first time, ESSA provides a formal definition for dual or concurrent enrollment programs as well as for early college high schools.<sup>19</sup> The new law seeks to promote these programs and opportunities for students in a variety of ways including by allowing LEAs

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<sup>14</sup> Sec. 1012

<sup>15</sup> Sec. 1111(b)(1)(D)(i)

<sup>16</sup> Sec. 8002(52). “WELL-ROUNDED EDUCATION.—The term ‘well-rounded education’ means courses, activities, and programming in subjects such as English, reading or language arts, writing, science, technology, engineering, mathematics, foreign languages, civics and government, economics, arts, history, geography, computer science, music, career and technical education, health, physical education, and any other subject, as determined by the State or local educational agency, with the purpose of providing all students access to an enriched curriculum and educational experience.”

<sup>17</sup> Sec. 1111(a)(1)(B) & Sec. 1112(a)(1)(B)

<sup>18</sup> Sec. 1111(c)(4)(B)(v)

<sup>19</sup> Sec. 8002(15) & Sec. 8002(17)

to use Title I funds for these programs and for providing teachers opportunities for joint professional development aimed at integrating academic coursework with CTE.<sup>20</sup>

**Public Report Cards:** ESSA maintains NCLB’s requirement that states and local districts create public report cards that are intended to publish information related to performance on ESSA’s new accountability measures along with other important information such as student participation in and completion of dual or concurrent enrollment programs.<sup>21</sup> States **must** make this available to the wider public in an accurate and timely fashion. Significantly, states **may** elect to include Perkins accountability information on these report cards, along with any other information that they deem important.<sup>22</sup>

**Work-based Learning:** If an LEA deems it appropriate, a local application for Title I funding **may** include a description for how CTE and academic instruction is delivered in a coordinated manner that affords students the opportunity to participate in work-based and experiential learning.<sup>23</sup>

**Effective Student Transitions:** A local application for Title I funding **must** also include language for how an LEA plans to support “effective student transitions” between high school and postsecondary education. In particular, LEAs are now encouraged to describe how they will ensure these student transitions by articulating their coordination efforts with institutions of higher education and employers as well as through other efforts such as career counseling, early college high schools or dual / concurrent enrollment opportunities, as applicable.<sup>24</sup>

## CTE Opportunities: Title II & Teacher Certification Provisions

**Highly-qualified Teacher Requirements:** ESSA fully repeals NCLB’s “highly-qualified teacher” requirement and replaces it with the term “effective” throughout the new law. States are responsible for determining teacher certification and licensure requirements and processes for the state, including “alternative” routes to certification.<sup>25</sup> ESSA amends all other federal laws making use of the highly-qualified teacher terminology.

**Professional Development Opportunities:** ESSA continues to provide states and LEAs with separate funding under Title II to support professional development opportunities and programs for teachers, school leaders and administrators. State education agencies **may** choose to use a portion of these funds to prepare teachers, principals and other school leaders to integrate academic and CTE instructional strategies, which **may** also include training on how to understand and make use of labor market information and ways to ensure effective student transitions to postsecondary education and the workforce.<sup>26</sup>

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<sup>20</sup> Sec. 1114(e)(2)(A)

<sup>21</sup> Sec. 1111(h)(1)(C)(viii)(I)(II)(bb)

<sup>22</sup> Sec. 1111(h)(1)(C)(xiv)

<sup>23</sup> Sec. 1112(b)(12)

<sup>24</sup> Sec. 1112(b)(10)

<sup>25</sup> Sec. 9214

<sup>26</sup> Sec. 2101(c)(4)(B)(xviii)

## CTE Opportunities: Title IV

**State Role in New Block Grant:** ESSA consolidates 49 existing programs into a new block grant, known as “Student Support & Academic Enrichment Grants” available to states via a prescribed formula. Funding for these grants is set to begin in FY 2017 along with all other noncompetitive programs authorized by the law.<sup>27</sup> ESSA contains an authorization level of \$1.605 billion in the first year and \$1.6 billion for each fiscal year thereafter until 2020.<sup>28</sup> These grants are intended to ensure that students receive a “Well-rounded Education,” improve school conditions for student learning and enhance the use of technology to support student achievement.<sup>29</sup> Five percent of the funds allotted to a state for this grant program may be reserved for statewide activities. The allowable uses of funds vary greatly, but states now have the ability to spend this funding on the following activities:

- Technical assistance for LEAs to ensure they are meeting the above purposes of the grant program;<sup>30</sup>
- Coordination and integration efforts with other funding streams and programs that meet the requirements of the grant program (this may include the Perkins Act and other federally funded programs);<sup>31</sup>
- Accelerated learning programs, such as dual or concurrent enrollment programs and early college high schools;<sup>32</sup>
- Reimbursement for low-income students for the costs of their participation in accelerated learning programs;<sup>33</sup>
- Costs of instruction and examination fees for AP and IB programs;<sup>34</sup> and
- CTE programs and activities that meet the requirements of ESSA’s definition for a “Well-rounded Education.”<sup>35\*\*</sup>

\*\* It is important to note that CTE is included in the definition of a “Well-rounded Education”. It is therefore possible to use funds allotted under this section of ESSA for CTE programs at the discretion of the state education agency.

**Local Role in New Block Grant:** The above noted grant program requires that 95 percent of the state’s allocation be disbursed to LEAs for district and school-level activities. Schools and districts within the state that have the greatest need are required to be prioritized under this grant program. Significantly, LEAs must conduct a “needs assessment” prior to grant funding that should examine student opportunities and access to well-rounded educational activities, personalized learning, and school

<sup>27</sup> Sec. 5(b)

<sup>28</sup> Sec. 4112. It is important to note that just like all other authorization levels contained in ESSA, annual funding for these grants is ultimately contingent on Congressional appropriators allocating funding for this portion of the law.

<sup>29</sup> Sec. 4101

<sup>30</sup> Sec. 4104(b)(1). It is important to bear in mind that this block grant seeks to ensure that students are receiving a “well-rounded education” which now includes CTE. It is therefore possible to interpret the purpose of this block grant, at least in part, to extend to CTE-related activities and efforts.

<sup>31</sup> Sec. 4104(b)(2)

<sup>32</sup> Sec. 4104(b)(3)(A)(i)(IV)(aa)

<sup>33</sup> Sec. 4104(b)(3)(A)(ii)

<sup>34</sup> Sec. 4104(b)(3)(A)(i)(IV)(bb)

<sup>35</sup> Sec. 4104(b)(3)(A)(i)(VII)

conditions.<sup>36</sup> The allowable uses of funds at the local level are much more comprehensive and include, but are not limited to:

- Supporting partnerships with postsecondary institutions, employers, and other entities with a “record of success” in implementing activities supported by this grant;<sup>37</sup>
- College and career counseling, guidance, and exploration activities, including training guidance counselors to effectively use labor market information to provide college and career planning;<sup>38</sup>
- Supporting the improvement of STEM instruction and student engagement in STEM subjects, as well as supporting the development of schools specializing in these subjects;<sup>39</sup>
- Supporting accelerated learning programs noted above, increasing the availability of these programs, reimbursing low-income students for the costs of these programs, and increasing student enrollment in accelerated learning programs;<sup>40</sup>
- Strengthening the technological capacity and infrastructure of schools;<sup>41</sup>
- Personalizing the student learning experience using technology and also supporting blended learning experiences for both students and teachers;<sup>42</sup>
- Increasing access for rural, remote and underserved areas to use digital learning resources;<sup>43</sup>
- CTE programs and activities that meet the requirements of ESSA’s definition for a “Well-rounded Education”.<sup>44</sup> \*\*

\*\* It is important to note that CTE is included in the definition of a “Well-rounded Education”. It is therefore possible to use funds allotted under this section of ESSA for CTE programs at the discretion of the local education agency.

**21<sup>st</sup> Century Community Learning Centers:** One of the few individual programs that will remain under ESSA, 21<sup>st</sup> Century Community Learning Centers are another funding stream available to states and local school districts to supplement the K-12 experience during non-school hours. At the state and local levels, these centers are required to fund a multitude of programs and activities that relate to a “Well-rounded Education,” including CTE.<sup>45</sup> Importantly, LEAs are encouraged to fund programs that partner with “in-demand fields of the workforce” as defined by the Workforce Innovation and Opportunity Act or that build “career competencies” such as programs funded by the Perkins Act.<sup>46</sup>

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<sup>36</sup> Sec. 4106(d)

<sup>37</sup> Sec. 4107(a)(2)

<sup>38</sup> Sec. 4107(a)(3)(A)

<sup>39</sup> Sec. 4107(a)(3)(C)

<sup>40</sup> Sec. 4107(a)(3)(D)

<sup>41</sup> Sec. 4109(a)(2)

<sup>42</sup> Sec. 4109(a)(1) & (3)

<sup>43</sup> Sec. 4109(a)(6)

<sup>44</sup> Sec. 4107(a)(3)(J)

<sup>45</sup> Sec. 4201(a)(2)

<sup>46</sup> Sec. 4205(a)(14)

## Conforming Amendments to Perkins

*The Every Student Succeeds Act contains several “conforming amendments” that have altered the Carl D. Perkins Career and Technical Education Act (Perkins) in a few ways. Below is a highlighted, but not exhaustive, list of these changes to current Perkins law. Portions of current Perkins law that are no longer funded or have never been funded, such as Title II or Sec. 118 of the Perkins Act, are not listed here.*

**Perkins Accountability:** Secondary Perkins accountability indicators 1S1, 1S2 and 4S1 will all now be calculated using ESSA’s new or changed methods for assessing student academic achievement and calculating cohort graduation rates.<sup>47</sup> The USDE’s Office of Career, Technical, and Adult Education (OCTAE) will likely release updated guidance for states to reflect these changes.

**State Perkins Plans:** With ESSA’s emphasis on a “Well-rounded Education”, NCLB’s “core academic subjects” terminology has been dropped in favor of this new definition. As mentioned above, ESSA defines this new term to include CTE and as such states’ Perkins plans must now include a description for how this concept will be supported.<sup>48</sup> ESSA also makes changes to current state Perkins plan requirements related to state-identified standards, updating Perkins to align with ESSA’s new terminology related to “challenging state academic standards” as defined by that law.<sup>49</sup> OCTAE will likely release updated guidance to states to reflect these changes.

**Perkins State Leadership:** ESSA makes a small modification to Perkins’ current required uses of funds for state leadership activities funding. As mentioned above, ESSA updates Perkins to clarify that states may now use a portion of their Perkins allocation designated for this purpose to ensure students are receiving a “Well-rounded Education”.<sup>50</sup> OCTAE will likely release updated guidance to states to reflect these changes.

**Local Perkins Plans and Uses of Funds:** ESSA makes similar changes to Sections 134 (Local Perkins Plans) and 135 (Local Uses of Funds) to update those sections to align to ESSA’s new terminology related to standards and to a well-rounded education.<sup>51</sup>

## Additional Implementation Resources

- [USDE ESSA Resource Page](#)
- [Advance CTE Updates on ESSA Implementation](#)

*For more information on this resource, please contact Steve Voytek, Advance CTE’s Government Relations Manager ([svoytek@careertech.org](mailto:svoytek@careertech.org)).*

<sup>47</sup> Sec. 9215(n)(3) & Perkins Sec. 113(b)

<sup>48</sup> Sec. 9215(n)(6)(B) & Perkins Sec. 122(c)(7)(A)(i)

<sup>49</sup> Sec. 9215(n)(6)(A) Perkins Sec. 122(c)(1)(I)(i)

<sup>50</sup> Sec. 9215(n)(7) & Perkins Sec. 124(b)(4)(A)

<sup>51</sup> Sec. 9215(n)(8), Sec. 9215(n)(9) & Perkins Sec. 134(b)(3), Sec. 135(b)(1)(A), respectively.

# MEANDERING TOWARD GRADUATION: TRANSCRIPT OUTCOMES OF HIGH SCHOOL GRADUATES



The Education Trust

## TO THE POINT

- ▶ Despite the rhetoric around college and career readiness for *all* students, just 8 percent of high school graduates complete a full college- and career-preparatory curriculum.
- ▶ Nearly half of graduates complete neither a college- nor career-ready course sequence. Rather than aligning high school coursework with students' future goals, high schools are prioritizing credit accrual, which treats high school graduation as the end goal.
- ▶ College and career readiness is still a new expectation that will require significant change to school structures, culture, and instruction to prepare students for postsecondary study aligned with their interests. We highlight school- and district-based levers for practitioners to consider in order to maximize postsecondary readiness among students.



Over and over again, educators and policymakers alike mouth the mantra: ALL kids ready for college and careers. But there remains a giant gulf between that rhetoric and the reality of today's high school graduates. Among recent graduates, fewer than 1 in 10 have taken a foundational set of courses they'd need to be both college- and career-ready. And almost half completed neither a college-prep nor a career-prep course sequence.

# MEANDERING TOWARD GRADUATION: TRANSCRIPT OUTCOMES OF HIGH SCHOOL GRADUATES

BY MARNI BROMBERG AND CHRISTINA THEOKAS

As a high school student in Louisiana, Tre decided he wanted a career in dentistry.<sup>1</sup> His counselor said his best option was to pursue fewer academic credits in exchange for more elective credits toward the health field he was interested in, so he did exactly that. But once Tre graduated and got to community college, he wasn't so sure it was the best advice. There, he learned that he hadn't placed on the college level in any subject, and his college counselor questioned why he hadn't taken more science classes. Tre lasted less than a year taking remedial courses before he dropped out.

Alarmed by the plight of American high school graduates who end up like Tre — with a high school diploma, but no path forward to achieve long-term goals — policymakers and educators have been working for years to solve this longstanding problem. In the policy arena, states have increased course requirements for graduation, instituted high school exit exams, and, most recently, adopted new college- and career-ready standards — all with the intention to advance achievement and open up more opportunities for low-income students and students of color, many of whom have historically graduated with inferior credentials. On the ground, school and district leaders have experimented with their own strategies — including smaller schools, career academies, and whole-school reform models (e.g., early colleges) — each aimed at better preparing and connecting students to the vast array of postsecondary opportunities available to them.

For both educators and policymakers, the aspiration is to prepare students for college *and* career, because it is now clear that college and career are no longer two distinct pathways. Most students will need to earn a postsecondary credential in order to achieve a family-sustaining wage in today's economy.<sup>2</sup>

However, given unequal preparation at the outset of high school and the differing demands of different postsecondary settings, achieving this aspiration is not without its challenges. True, graduation rates have reached an all-time high and postsecondary enrollment rates are steadily rising.<sup>3</sup> But, like Tre, thousands of those new college students are testing into remedial reading, writing, or math courses because they don't have the foundation to perform at the levels demanded in college classes.<sup>4</sup> Employers, too, report that high school graduates don't have the basic foundational skills to start in entry-level positions.<sup>5</sup>

What's going on here? Are students being exposed to the foundational content that would prepare them to achieve their postsecondary goals? Are they being afforded

experiences that groom them to problem solve, study effectively, and work productively in teams?

To get better answers to these questions, we dug into the most recent national database of high school transcripts to find out what it could tell us about the experiences and preparation of our nation's graduates. How many of our young people are completing a full college- and career-prep curriculum? How many also have grades that show evidence of mastery? And how do those patterns differ by race and socioeconomic status as well as students' own aspirations?

To be sure, course-taking and grades can only tell us so much about genuine readiness for success in college and careers. Indeed, research suggests that students need some combination of:

- **Foundational academic content knowledge;**
- **Cognitive strategies**, such as collecting information and identifying and solving problems;
- **Learning skills and dispositions**, such as goal-setting, persistence, time management, and study skills; and,
- **Specialized content knowledge** applicable to their intended path after graduation. Indeed, readiness for a postsecondary nursing program requires different knowledge than does a pre-law program.<sup>6</sup>

Future Education Trust analyses will attempt to bring some data to bear on other components of readiness. In the meantime, though, we believe the data on both college and career course-taking, as well as the grades earned in those classes, can serve as a valuable foundation for understanding the trends in postsecondary readiness.

The data suggest that students are meandering toward graduation. Rather than ensuring students have access to a cohesive curriculum that aligns high school coursework and students' future goals, high schools are prioritizing credit accrual, which treats graduation as the end goal. These data call attention to how far we have yet to travel to assure that all of our students — and most especially students from disadvantaged backgrounds and students of color — are fully prepared to take advantage of the full range of opportunities that await them after high school. Instead of being prepared for college *and* career, many of our students turn out to have been prepared for neither.

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Marni Bromberg is a senior research associate and Christina Theokas is a former director of research at The Education Trust.

## What Comprises a College-Ready Curriculum?

Subject	Credits	Specific Courses
 English	4	N/A
 Math	3	Algebra II
 Science	3	Biology and Chemistry or Physics
 Social Studies	3	U.S. or World History
 Foreign Language	2	Same Language Study

## What Comprises a Career-Ready Curriculum?

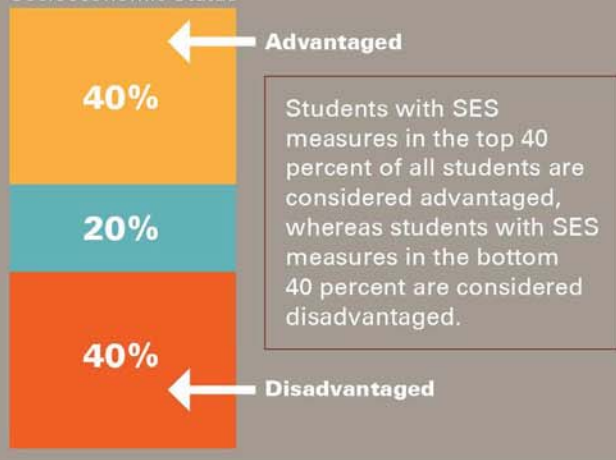
Subject	Credits	Specific Courses
 Career Technical Education	3	In the Same Field

## How Do We Measure "Advantage?"

**Advantage** refers to a student's socioeconomic status (SES), which is a measure of family income, parental occupational status, and parental education.



Socioeconomic Status



## OUR ANALYSIS

To help us make sense of course-taking patterns, we examined transcript data from the High School Longitudinal Study, which follows a nationally representative group of ninth-graders from 2009 through 2013, the fall after their expected graduation.<sup>7</sup> We group high school graduates into the following categories based on the curriculum they've completed:

- **College-Prep Curriculum:** Consists of four credits in English; three credits in math, including algebra II; three credits in social studies, including U.S. history or world history; three credits in science, including biology and either chemistry or physics; and two credits in the same foreign language. (See sidebar.)<sup>8</sup> This definition is aligned with the entry requirements at many public colleges but does not indicate exposure to all of the experiences and knowledge a student might need to be ready for college.<sup>9</sup>
- **Career-Prep Curriculum:** Consists of three or more credits in a broad career field such as health science or business. (See sidebar for a full list of career fields.)<sup>10</sup> This definition assumes a concentration in high school will provide the foundation for a student to pursue postsecondary study in a career field but does not signal immediate readiness for a career after graduation.
- **College- and Career-Prep Curriculum:** Consists of both college-ready and career-ready course-taking sequences.
- **No Cohesive Curriculum:** Consists of neither the college-ready nor the career-ready sequence.

Certainly, we know course completion is an imperfect measure of readiness. Courses vary in expectations and quality, and credit accrual does not signal mastery. To address these problems, we have also examined grades earned in academic and career coursework as a proxy measure of whether learning has occurred. We recognize that grades are also a reflection of course expectations and student behaviors, but research has shown grade point averages (GPAs) to be predictive of college success — far more, actually, than test performance.<sup>11</sup>

We compare these data based on race and socioeconomic status. SES is a measure of relative advantage that accounts for multiple background characteristics, including family income, parental education, and parental occupations. When we refer to low-SES (or disadvantaged) students, we mean students in the bottom 40 percent of the SES distribution, and when we refer to high-SES (or advantaged) students, we mean those in the top 40 percent of the SES distribution.

Together, data on courses and grades can broaden our current understanding of who is college- and/or career-ready and which additional indicators we need to truly gauge readiness. Moreover, school and district leaders can repeat this analysis with their own data to better understand which of their students are prepared for postsecondary opportunities.

## Which Careers Can Students Study in High School?

Career Field Category	16 Career Clusters
1. <b>Agricultural and Natural Resources</b>	Agriculture, Food, and Natural Resources
2. <b>Business and Marketing</b>	Business and Administration Finance Retail/Wholesale Sales and Services
3. <b>Communications and Design</b>	Arts, Audio-Video Technology, and Communications
4. <b>Computer and Information Sciences, Engineering</b>	Information Technology Scientific Research and Engineering
5. <b>Trades</b>	Architecture and Construction Manufacturing Transportation, Distribution, and Logistics
6. <b>Consumer and Culinary Services</b>	Human Services Hospitality and Tourism
7. <b>Health Sciences</b>	Health Sciences
8. <b>Public Services</b>	Education and Training Government and Public Administration Law, Public Safety, Corrections, and Security

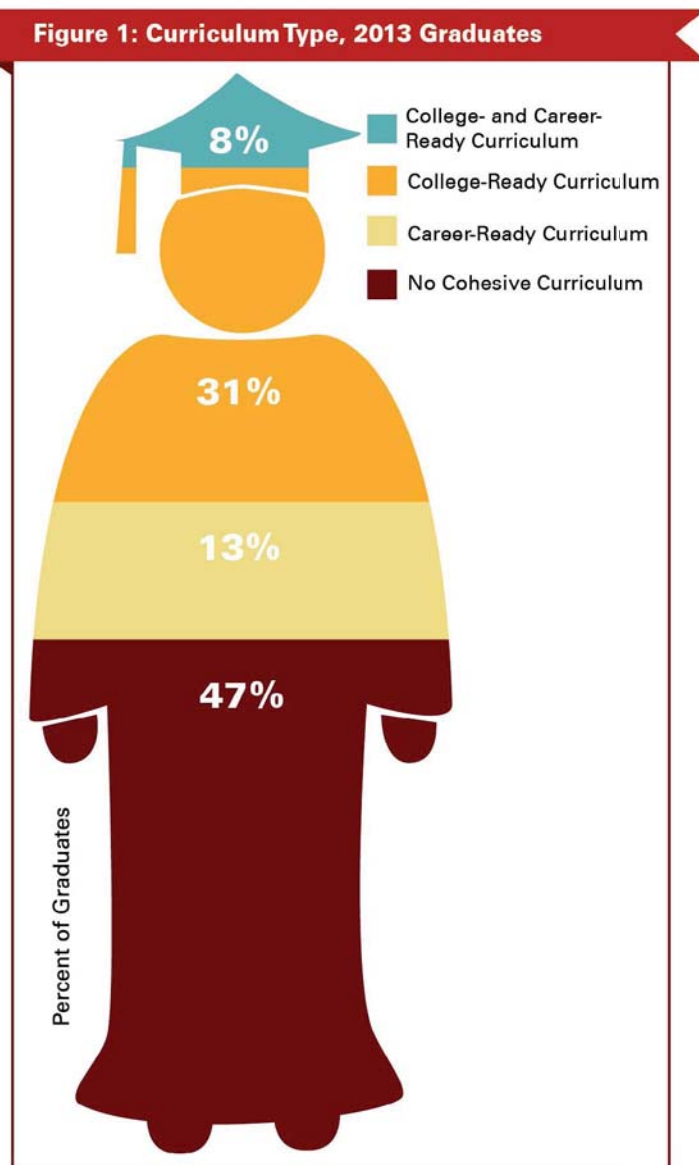
These career categories are loosely aligned to the 16 career clusters that were designed by the Office of Career, Technical, and Adult Education at the U.S. Department of Education and sponsored by Advance CTE.

## WHO COMPLETED WHICH COURSES?<sup>12</sup>

**Only 8 percent of graduates completed a full college- and career-prep curriculum.**

Despite the rhetorical commitment to college and career readiness for all students, only a small fraction of 2013 graduates completed both college- and career-preparatory course sequences in high school (*Figure 1*). Rates of college- and career-ready course-taking are consistently low across student groups: Between 7 and 9 percent of white, black, and Latino graduates have taken a college-ready and career-ready sequence of courses (*Figure 2a*).<sup>13</sup>

Some might think that students just can't cram both sets of courses into the typical high school schedule, but the full college- and career-ready sequence consists of only 18 credits; high school students earn, on average, 26 credits before graduation. So for the average student, there is plenty of space for college prep, career prep, and other electives.



### EDUCATOR IMPLICATIONS

All students will not follow the exact same path through high school, but educators must be aware of how different courses and sequences are going to build the academic foundation and career-ready skills all students need. Students must be set up for success immediately after high school (i.e., to meet eligibility requirements for postsecondary pathways) and later down the line (i.e., to have the requisite knowledge and skills if they want to change paths).

Some schools are already experimenting with methods for expanding college and career opportunities, like giving students credit for mastering college-level work outside of the traditional course structure.

We encourage high schools to examine which of their recent graduates are college- and career-ready. They should then take a critical look at their approach to providing students with foundational knowledge and skills as well as opportunities to pursue individual interests aligned to career goals.

### SCHOOL-BASED LEVERS FOR CHANGE

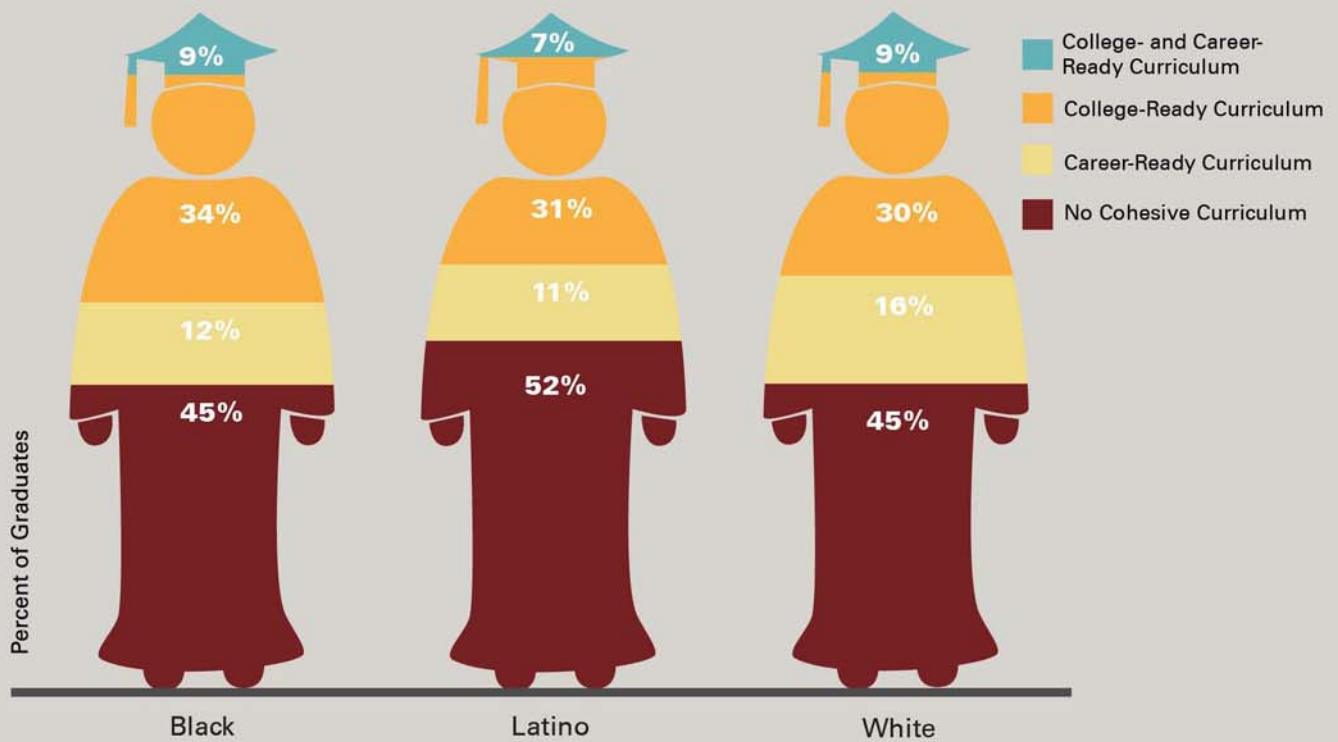
- **Transcript analysis:** Which students can currently access both an academic and career-oriented curriculum?
- **Master schedule:** How are courses and time structured to provide students with the opportunity to gain necessary knowledge and skills and access content that interests them? Does tracking, formal or informal, prevent students from taking both academic and career courses?
- **Credit policies:** Do students have opportunities outside of the traditional course structure to attain knowledge and skills? What is the quality of these opportunities, and how are they recognized on transcripts?
- **Graduation requirements:** What are your state and/or local graduation requirements? Would additional requirements help prepare all students for college and careers?

### Almost a third of graduates only complete a college-ready sequence.

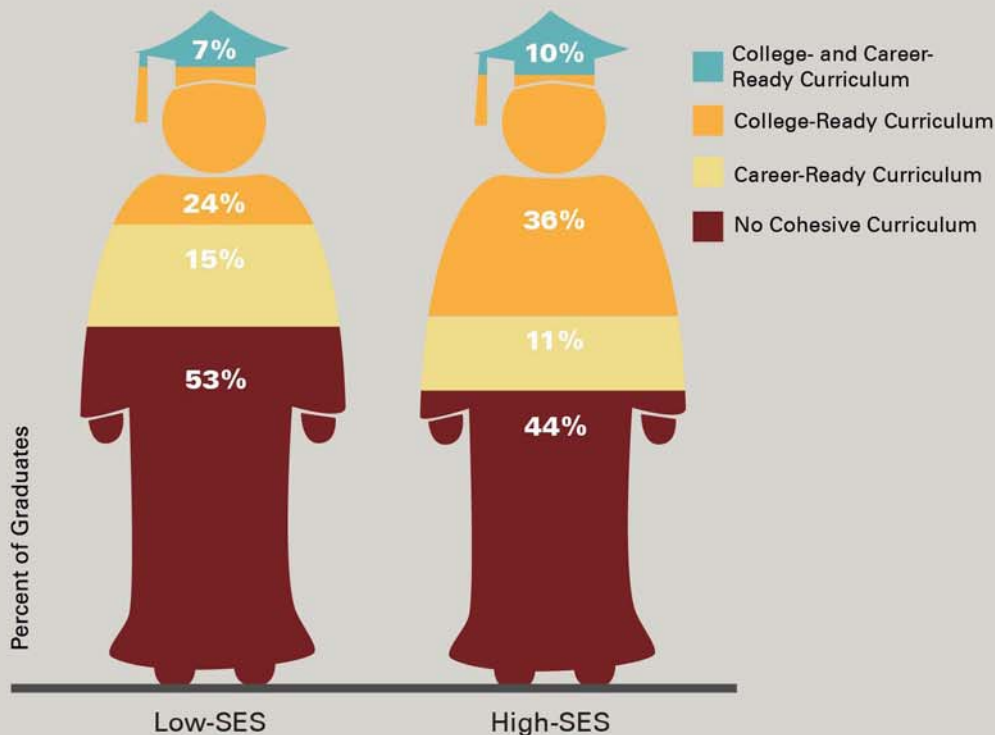
Three in 10 graduates complete only a college-ready sequence, and if we combine this group with those who have completed a college- and career-ready sequence, about 4 in 10 have accessed a college-ready curriculum. Students from disadvantaged backgrounds were 14 percentage points less likely to complete a college-prep or college- and career-prep course sequence than advantaged students, but there were no significant differences between racial/ethnic groups (*Figures 2a and 2b*).<sup>14</sup>

When we examine what is preventing students from completing a college-ready curriculum, we find that 57 percent of students who did not take a college-ready curriculum are missing *more than one* requirement — with the remaining 43 percent missing only one.

**Figure 2a: College- and Career-Ready Course-Taking, by Race (2013)**



**Figure 2b: College- and Career-Ready Course-Taking, by Socioeconomic Status (2013)**



Among students who missed only one requirement, math and foreign language were the greatest barriers. About a third of these students missed the math requirement, not because they did not take enough math credits, but because they did not specifically take an algebra II credit.<sup>15</sup> Algebra II is a course that's particularly related to enrollment and success in college.<sup>16</sup> Our data show students often get locked into a math trajectory based on their incoming math placement: Only 41 percent of students who took pre-algebra or lower as ninth-grade students eventually took an algebra II credit.<sup>17</sup> By contrast, 70 percent of students who started out in algebra I and 75 percent of students who started out in geometry eventually reached at least algebra II.

The other major barrier to taking a college-ready curriculum was foreign language: 31 percent of those who missed only one requirement did not take two foreign language credits.<sup>18</sup>

Science was the third most prevalent bottleneck among students who missed only one requirement within the college-ready curriculum. While only 3 percent didn't take three science credits, 16 percent didn't take the combination of biology and chemistry or physics — despite that these are foundational science courses necessary for many postsecondary pathways.

What's more, among students who missed more than one requirement, science was the leading barrier: 81 percent of this group either didn't take enough science credits or didn't take the specific science courses needed to fulfill the college-ready curriculum.

### EDUCATOR IMPLICATIONS

Many states don't require students to take the courses that determine eligibility to attend public colleges, which could be contributing to the trends in college-ready course-taking. Foreign language is a good example: It's required by most public colleges, yet most state policies don't require it for graduation.<sup>19</sup> State graduation requirements also vary from two to four science credits, often without specifying content or laboratory status.<sup>20</sup> High school counselors should ensure that students understand the requirements not only for graduation, but also for entry into different postsecondary settings that are aligned with students' goals. Schools can't let students get caught in the gap between qualifying for graduation and falling short of postsecondary preparedness.

Even when coursework is required, the data suggest that many students are not progressing along the math pipeline and don't ultimately reach advanced levels. Attending to the courses students take is important in all subject areas, not just math. For students to master disciplinary content and gain deeper levels of understanding, instruction needs to go deeper, year by year, giving students the opportunity to build on previous knowledge and extend it to new topics, questions, and challenges. And depending on the path after graduation, certain courses may be requirements for entry. For example, students enrolling in a community college nursing program need multiple advanced math and science courses.

### SCHOOL-BASED LEVERS FOR CHANGE

- **Graduation requirements:** Even if your state or district graduation requirements don't align with those in state colleges, does the school ensure all students take a curriculum that would qualify them for entry?
- **Postsecondary planning:** How do counselors and teachers engage students in planning for postsecondary school or training? Do students have plans to help them align their coursework and experiences in school to their future goals?

### Just over 1 in 10 graduates complete a career curriculum, but not a college curriculum.

Thirteen percent of graduates completed a three-course career sequence, but not the college-ready course requirements — making this pathway only slightly more common than the college- and career-ready sequence. It is not highly pursued among any group of students, although disadvantaged and white graduates are slightly more likely than advantaged and graduates of color to complete it (*Figures 1, 2a, and 2b*). Among students who take a career curriculum, the most common career fields are computers and engineering (22 percent) and the trades (21 percent), which include fields like construction, architecture, or manufacturing.

On average, career-but-not-college-ready students took almost seven career technical education (CTE) credits, suggesting they were investing more time than the basic curricular definition. But those courses may have been completed at some expense to academic coursework. While the majority of these students met college-ready requirements in English and social studies, 43 percent missed the math requirement, 54 percent missed the science requirement, and 66 percent fell short in foreign language. Depending on the career path that students are interested in, missing math and science courses could be a serious problem.

One major barrier to achieving career readiness for more students is the number who take disjointed CTE courses. Of students who did not complete a career-ready curriculum, 26 percent completed enough CTE credits to earn a career-ready designation, but those credits were across different career fields.<sup>21</sup> Our definition of career fields is quite broad to begin with, meaning non-completers likely took courses in very unrelated fields.

### EDUCATOR IMPLICATIONS

High schools should not curtail career exploration, as it is developmentally appropriate, but staff should think strategically about how to help students link academic and career courses to their postsecondary goals. It is especially important for students to learn about the broad array of careers and not only choose

something that seems interesting, but will foreclose other opportunities later on. Students living in impoverished or rural areas may not know about the variety of careers to choose from and if they do, what is necessary to get there. Many students are also unaware of the academic prerequisites for many postsecondary career pathways. Schools should also be clear about options, choices, and consequences so students don't end up like Tre — thinking they are taking the classes they will need for their postsecondary plans, when, in fact, those classes are not sufficient.

### SCHOOL-BASED LEVERS FOR CHANGE

- **Postsecondary career pathways:** Has your state or district articulated the requirements for entry into various postsecondary training pathways, and how do your school's offerings and guidance align?
- **Academic and CTE integration:** Are CTE teachers expected to integrate academic content, and are academic teachers expected to integrate applied career content? If so, do teachers have the training and capacity to do this well?

### Nearly half of graduates do not complete a college- or a career-ready course sequence.

Forty-seven percent of graduates did not complete any cohesive curriculum, making this the most common pathway of all (Figure 1). This pattern is far too common for all groups of students and is particularly problematic among Latino graduates and graduates from disadvantaged families (Figures 2a and 2b). Compared with 45 percent of white and black graduates, 52 percent of Latino graduates didn't take a cohesive curriculum. Similarly, 44 percent of students from more advantaged families didn't take a cohesive curriculum, compared with 53 percent of students from disadvantaged families.

These students are high school *graduates* — meaning they are technically completers, but did not take a cohesive curriculum that culminated in a direction for postsecondary study. On average, they completed 25 credits — fewer credits than graduates in other curriculum groups but still well over the 18 necessary for the college- and career-ready curriculum.

High rates of course failure represent a key contributor to this problem: Overall, the graduating class lost roughly 3.4 million credits to course failures and withdrawals. This represents only those credits lost by those who graduated, not the countless lost among those who dropped out.

But, these lost credits were heavily concentrated among those who did not complete a cohesive curriculum: More than half (54 percent) of these students failed or withdrew from at least one course in high school, compared with only 21 percent of graduates who completed a college- and career-ready curriculum (Figure 3). What's more, nearly 1 in 4 students

who did not complete a cohesive curriculum lost *more than* two credits to course failures and withdrawals, compared with just 1 in 50 students who completed a college-and-career-ready curriculum. Students who complete a career-ready course sequence are only slightly less likely to have failed a course as those who did not complete a cohesive curriculum, suggesting this pattern spans a few curricular pathways.

### EDUCATOR IMPLICATIONS

Instead of cohesive learning experiences that prepare students for next steps, the data suggest that high schools are prioritizing credit accrual.

Student preparation, interests, and opportunity structures in high schools don't always align naturally, meaning there are no easy solutions. A custom program of study for each student is not realistic (or necessary), nor is training students for a specific job upon graduation. Rather, the challenge is finding ways to provide students with foundational academic content and learning skills while nurturing their interests and more personalized goals.

High rates of course failure are a key contributor to this problem. Failure is a well-documented norm in high schools and not only has consequences for course completion and learning, but also student self-perception, efficacy, and motivation.<sup>22</sup> A common response is the development of credit recovery programs, which focus on ensuring students get the credits they need for graduation. But these programs need to be developed in ways that lead to mastery and ensure students have opportunities to reach their learning goals, rather than just accumulate credits.

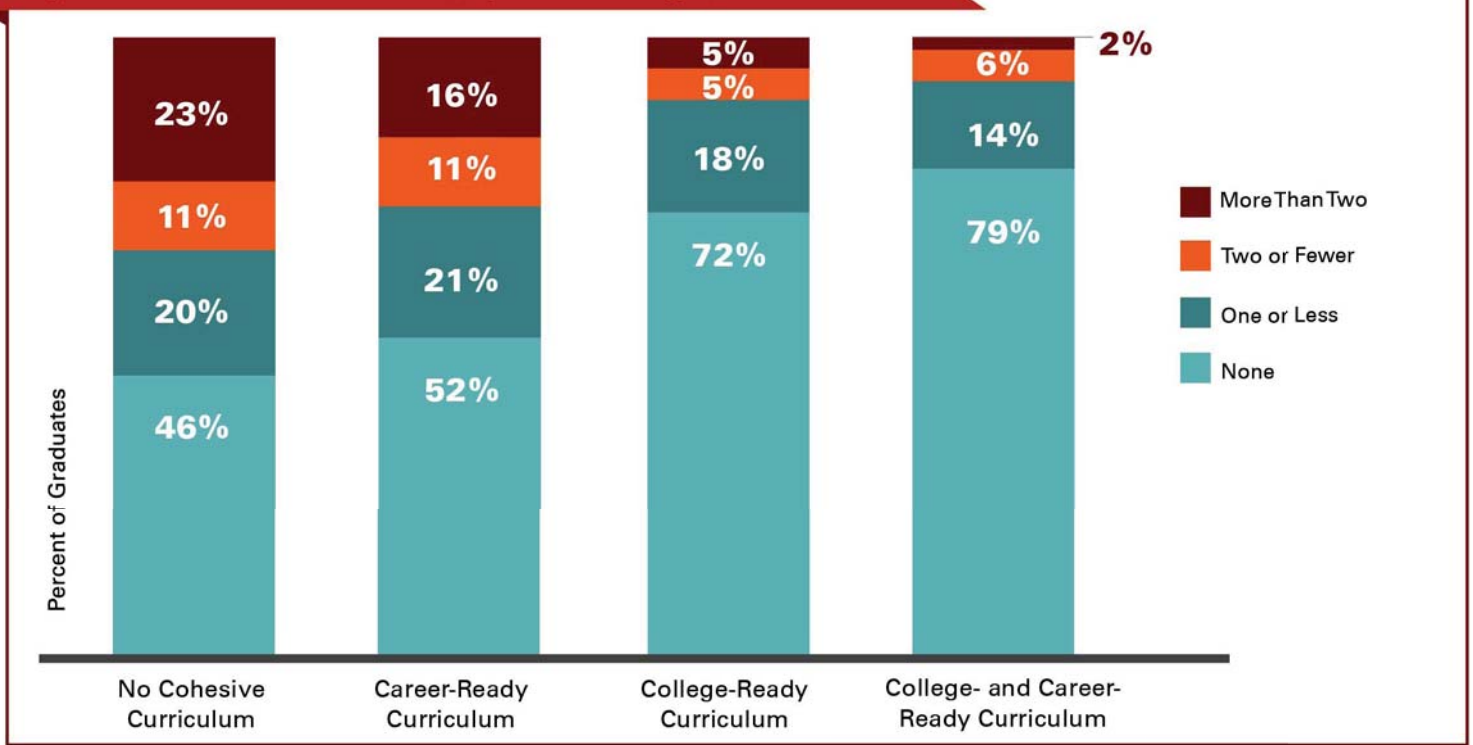
Alternatively, high schools can develop preventative approaches to course failure by monitoring student performance in real time and providing the instructional and cultural supports that enhance course mastery.<sup>23</sup> Efforts to accelerate learning in middle school and early high school can also help avert some of these patterns. Without these shifts in intervention, schools are likely to see rates of failure increase as schools transition to more rigorous college- and career-ready standards — a level not previously expected of many students.

### SCHOOL-BASED LEVERS FOR CHANGE

- **Course guidance:** When adults provide guidance to students around course-taking, does it situate credit accrual and graduation as the only goals?
- **Transcript analysis:** Are high rates of course failure preventing students from achieving readiness for next steps? If so, are course failures clustered in certain grades, subjects, or courses? And do opportunities to recover credits allow students to progress to more rigorous coursework later on?
- **Acceleration culture:** Do students have opportunities early on to accelerate their learning and prevent course-failures from occurring?



Figure 3: Failures and Withdrawals, by Curriculum Type, 2013 Graduates



Note: The graph shows number of lost credits, not lost courses, due to failures. Credits were counted as failures if students' transcripts indicated that they received 0 credits for a course AND received a grade D or lower, not passing, or unsatisfactory.

**Mastery gaps are widest among graduates who have completed a college-ready curriculum: 82 percent of white graduates received a 2.5 GPA or higher in their academic courses, compared with 51 percent of black graduates and 63 percent of Latino graduates.**

### WHO DEMONSTRATES MASTERY?

**About 1 in 7 graduates complete a cohesive curriculum but do not demonstrate mastery of that curriculum.**

Seat time itself is not sufficient to signify readiness for postsecondary learning opportunities. So to further understand who is college- and/or career-ready, we introduce a minimum GPA of 2.5 (roughly a B- average) in academic and career coursework as an additional indicator of readiness and then reassess how many students are college- and/or career-ready.<sup>24</sup> So, for example, we have considered students to be college-ready if they have completed a college-ready curriculum *and* have a 2.5 GPA or higher in their academic

courses, and career-ready if they have completed a career-ready curriculum *and* earned a 2.5 GPA in their career coursework.

When we add this GPA mastery benchmark as an additional requirement, 14 percent of all graduates would no longer be considered college- or career-ready (*Figure 4*) — joining the 47 percent of students who never took the college- or career-ready courses in the first place.

Graduating with demonstrated mastery is considerably less common among students of color and disadvantaged students. For example, among students who completed a career-ready curriculum, 85 percent of white students

earned a 2.5 GPA or higher in their career courses, compared with only 72 percent of black students and 76 percent of Latino students. Similarly, 87 percent of more advantaged students who took a career-ready sequence met this mastery benchmark, compared with 75 percent of students from disadvantaged backgrounds (*Figure 5a*).

Mastery gaps are widest among graduates who have completed a college-ready curriculum: 82 percent of white graduates received a 2.5 GPA or higher in their academic courses, compared with 51 percent of black graduates and 63 percent of Latino graduates (*Figure 5b*). Among more advantaged graduates who completed a college-ready curriculum, 80 percent received a 2.5 GPA, whereas 64 percent of disadvantaged graduates met this benchmark.

### EDUCATOR IMPLICATIONS

Course grades capture a complex mix of performance metrics and behaviors, many of which are not totally transparent from a GPA alone. Student effort certainly plays a role, as do teacher policies

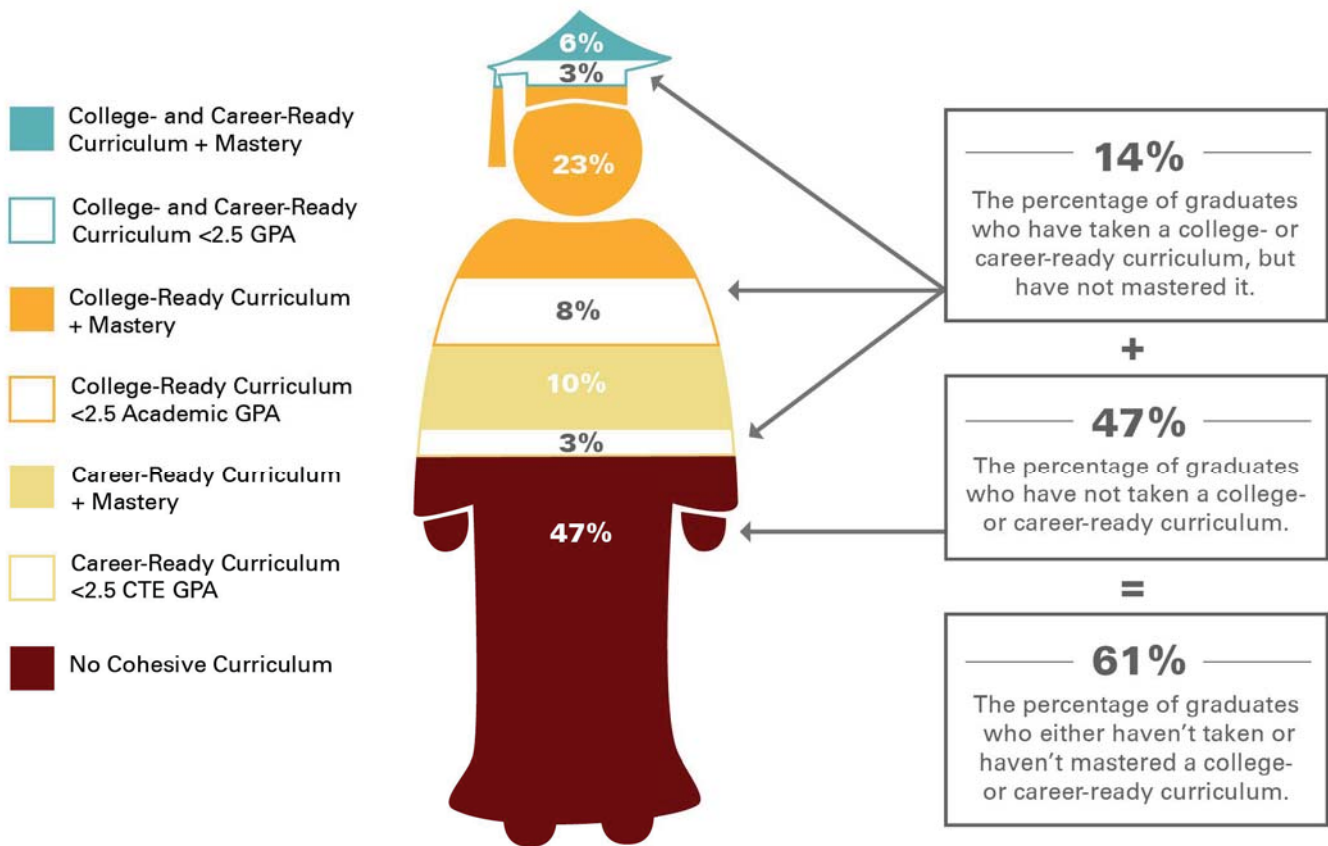
and practices. Ultimately though, grades represent demonstrated mastery, which is determined by how educators instruct, support, and engage their students.

GPA gaps within curriculum categories suggest that students aren't being afforded equitable preparation, instruction, or support to master material in their courses. It seems seat time and scheduling have been the emphasis, rather than quality of coursework, to ensure that instruction and support are leading to content mastery. Yet mastery, not seat time, is what sets graduates up for success in postsecondary settings.

### SCHOOL-BASED LEVERS FOR CHANGE

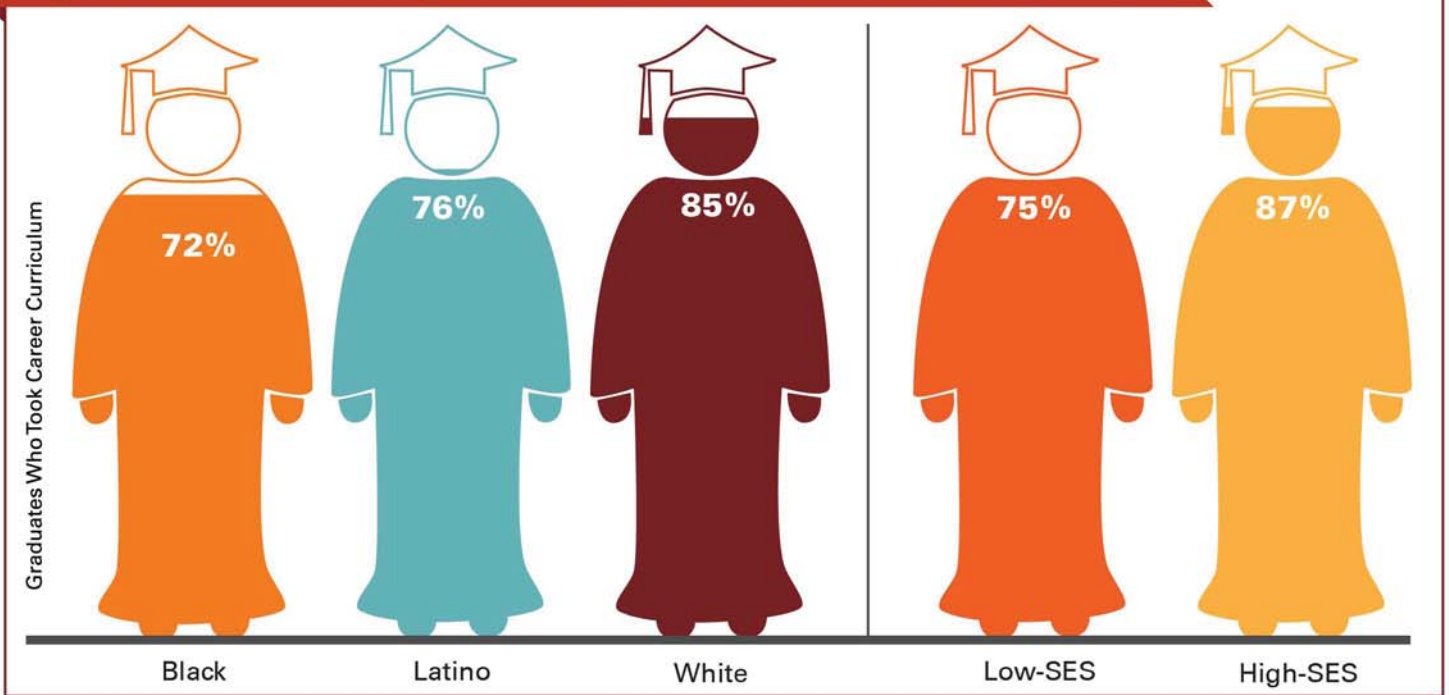
- **Grading policy:** Does your school have a uniform grading policy? Is this monitored to assure consistency across teachers and subjects? What is your school's policy on course failure?
- **Educator development:** Are teachers supported to provide rigorous and engaging instruction regardless of content area?

**Figure 4: Curriculum Type and Mastery, 2013 Graduates**



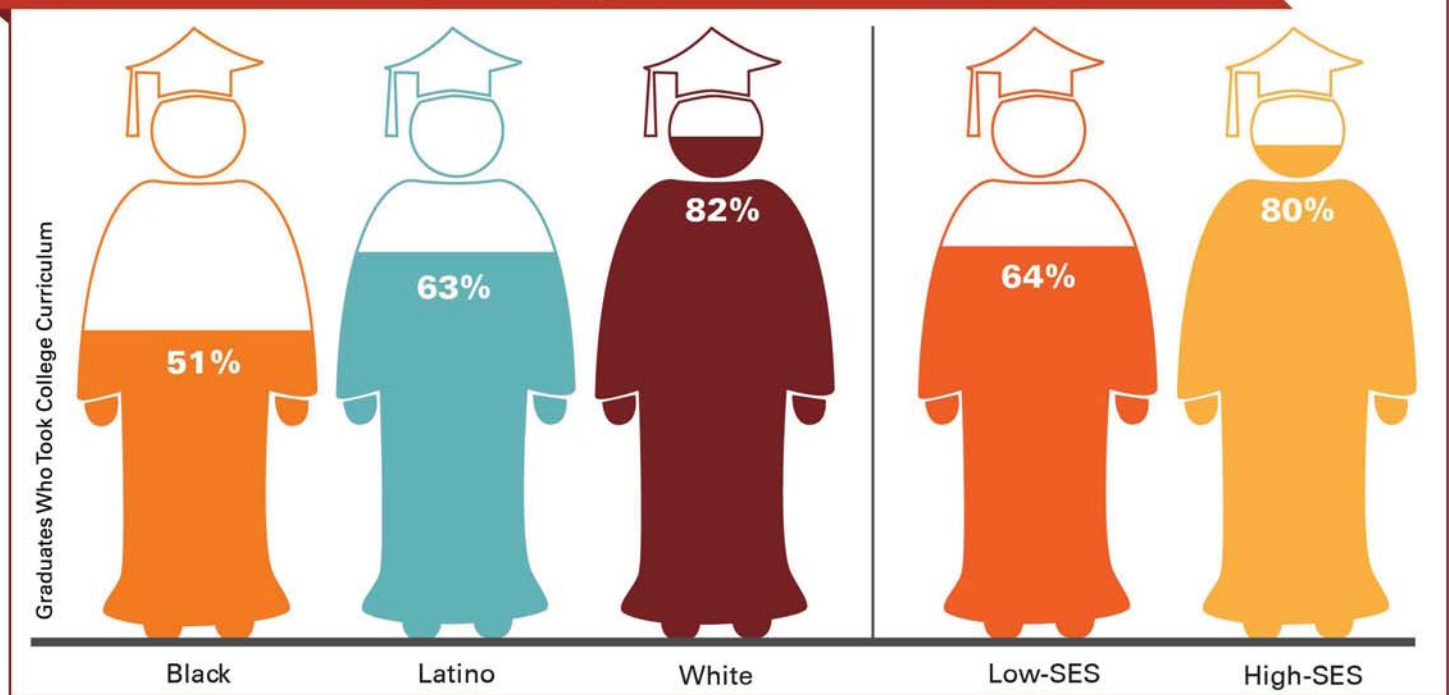
Note: Mastery in the career curriculum is defined here as receiving a 2.5 GPA or higher in all CTE courses. Mastery in the college-ready curriculum is defined here as receiving a 2.5 GPA or higher in all academic courses. Mastery in the college- and career-curriculum is defined here as meeting both GPA benchmarks. The percentages in the college- and career-ready curriculum categories do not sum to the total percent of students completing this curriculum (8 percent) because of rounding.

**Figure 5a: Graduates Who Completed a Career Curriculum With a 2.5 GPA in CTE Courses**



Note: This graph includes both students who completed only a career-ready curriculum and students who completed a college-and-career curriculum.

**Figure 5b: Graduates Who Completed a College Curriculum With a 2.5 GPA in Academic Courses**



Note: This graph includes both students who completed only a college-ready curriculum and students who completed a college-and-career curriculum.

## WHAT ABOUT STUDENT ASPIRATIONS?

The majority of students aspire to a college degree, despite different curriculum experiences.

The fact that only half of graduates take a cohesive college-or-career curriculum — and fewer still master one — could represent genuine indecisiveness among students around postsecondary planning. But data about students’ postsecondary aspirations suggest just the opposite: The vast majority of graduates expect to earn a postsecondary degree. This is true even among students who have not accessed a cohesive high school curriculum.

About 6 in 10 graduates who do not take a cohesive curriculum while in high school expect to at least earn a bachelor’s degree, and an additional 2 in 10 expect to pursue either a postsecondary certificate or an associate degree (Figure 6). Together, this is only slightly fewer than the 9 in 10 graduates who take a college-ready curriculum expecting to earn some postsecondary degree. What’s more, students report these expectations at the end of their junior year, suggesting that their schools have — either explicitly or indirectly — communicated that their diploma will signify preparation for college enrollment, even if the information on their transcripts suggests otherwise.<sup>25</sup>

On the other hand, course-taking patterns do seem to signal a bit of intentionality, at least for a small group of graduates. For example, graduates who take a career-ready course of study are more likely than graduates in other groups to say they expect to pursue a certificate or an associate degree, suggesting that part of this group may plan to enroll in a program aligned with their prior studies and interests. The question is whether they

are prepared with the foundational academic skills that are typically required in such programs.

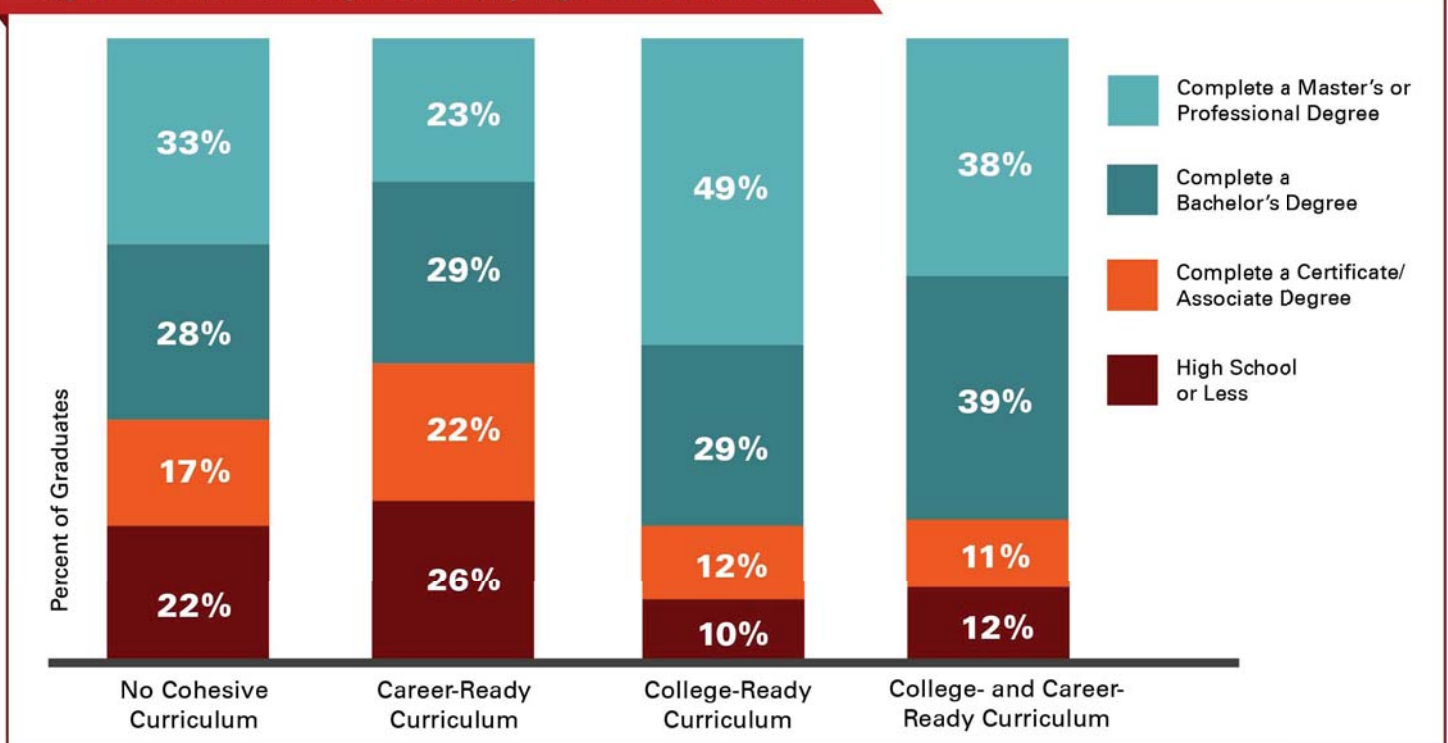
### EDUCATOR IMPLICATIONS

High school graduates view postsecondary education as their best option. Helping students to connect their courses and learning with what they want to do after high school is an essential step in achieving true readiness. Students need to know what they must achieve (e.g., grades, courses, experiences) for various options after high school. Educators should support students’ aspirations, but they should also be clear with students about the foundational knowledge, skills, and dispositions that are necessary for all postsecondary pathways. When students experience high expectations, receive support to reach their goals, become active partners in decisions, and see their learning as important and applicable, they are apt to be more motivated and engaged.

### School-Based Levers for Change

- **Postsecondary alignment:** Do guidance counselors know and understand the entry requirements for a diverse set of postsecondary pathways? Do teachers know and understand them for their content areas? Beyond the entrance requirements, do they know what is necessary to be placed into credit-bearing courses?
- **Graduation expectations:** Are students encouraged to take a foundational academic curriculum regardless of their postsecondary aspirations? What, if any, parameters exist for students to deviate from a college-ready curriculum?

Figure 6: Educational Expectations, by High School Curriculum



## COLLEGE AND CAREER READINESS: STILL MORE RHETORIC THAN REALITY

Over and over again, educators and policymakers alike mouth the mantra: ALL kids ready for college and careers. But there remains a giant gulf between that rhetoric and the reality of today's high school graduates. Among recent graduates, fewer than 1 in 10 have taken a foundational set of courses they'd need to be both college- and career-ready. And almost half completed neither a college-prep nor a career-prep course sequence. Much like descriptions of the "shopping mall high school" back in 1985, our data show that today's students are still meandering through lots of disconnected courses that get them to graduation but nowhere else.<sup>26</sup>

Our data highlight some clear barriers to changing those patterns, including high rates of course failure that can crowd out other options for knowledge and skill development. And far too few students of color or from disadvantaged backgrounds are mastering content within their curricular pathway.

Despite these problems, most students aspire to a college degree. Importantly, most students *need a postsecondary degree or credential*. If they are to realize that goal, however, schools need to do a much better job at helping all of our students understand what is necessary to be fully prepared for credit-bearing coursework in college. For most students, this means an academic foundation *plus* a content focus aligned with their interests. Yet most students are not taking a career sequence in high school that would provide a foundation for further study, suggesting we do not have broad agreement about what career readiness means for high school students and how to accomplish it.

Overall, our findings reflect a focus on credit accumulation, rather than a focus on true readiness for life after graduation. This shortsightedness has long-term repercussions for students like Tre, who flounder in remedial courses once they get to college or struggle to find personally relevant and sustainable work. Since dropping out of college, Tre — once ecstatic to be the first in his family to go to college — now bounces around retail and service jobs, as they go in and out of season.

Still, these findings do not mean that our education system should revert back to tracking students into easy and hard pathways an adult may think are best suited to students' futures. College and career readiness is a new expectation that reflects the reality and demands students will face. It requires significant change to school structures, culture, and instruction to engage students in relevant work that prepares them for postsecondary study aligned with their interests. It's a huge shift for high schools, but a critical one if our education system is to groom students like Tre to pursue their goals and aspirations after graduation. ■

## NOTES

1. Out of respect for student privacy, Tre is a pseudonym.
2. Anthony P. Carnevale, Tamara Jayasundera, and Artem Gulish, "Good Jobs Are Back: College Graduates Are First in Line," (Washington, D.C.: Georgetown Center on Education and the Workforce, 2015), <https://cew.georgetown.edu/cew-reports/goodjobsareback/>.
3. (1) U.S. Department of Education, "U.S. Graduation Rate Hits New Record High," February 12, 2015, <http://www.ed.gov/news/press-releases/us-high-school-graduation-rate-hits-new-record-high-0>; (2) U.S. Department of Education, *Digest of Education Statistics: 2013*, NCES 2015-011, Chapter 3, (Washington D.C.: National Center for Education Statistics, May 2015), [http://nces.ed.gov/programs/digest/d13/ch\\_3.asp](http://nces.ed.gov/programs/digest/d13/ch_3.asp).
4. Xianglei Chen, *et al*, "Academic Preparation for College in the High School Senior Class of 2003-04," NCES 2010-169, (Washington, D.C.: National Center for Education Statistics, January 2010), <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010169>.
5. Peter D. Hart Research Associates and Public Opinion Strategies, "Rising to the Challenge: Are High School Graduates Prepared for College and Work? A Study of Recent High School Graduates, College Instructors, and Employers," (Washington, D.C.: Achieve, Inc., February 2005), [http://www.achieve.org/files/pollreport\\_0.pdf](http://www.achieve.org/files/pollreport_0.pdf).
6. David T. Conley and Charis McGaughy, "College and Career Readiness: Same or Different?" *Educational Leadership* 69, no. 7 (April 2012): 29-34; and David T. Conley, "Defining and Measuring College and Career Readiness," (presentation, Council of Chief State School Officers Annual Policy Forum, Phoenix, November 17-19, 2011), [http://programs.ccsso.org/projects/Membership\\_Meetings/APF/documents/Defining\\_College\\_Career\\_Readiness.pdf](http://programs.ccsso.org/projects/Membership_Meetings/APF/documents/Defining_College_Career_Readiness.pdf).
7. We have limited our sample to students who received a high school diploma from a public school by 2013. Students were removed if they had fewer than three years of transcript data available. Our data are representative of roughly 3.2 million ninth-graders who graduated from public high school by fall 2013.
8. Credits taken prior to ninth grade are not counted toward this definition. Students who took a full credit of integrated math were counted as having taken algebra II. Course credits have been standardized into Carnegie units, such that one Carnegie credit is equivalent to 120 hours of class time.
9. Peter A. Conforti, "What is College and Career Readiness? State Requirements for High School Graduation and State Public University Admissions," *Pearson Bulletin* 23 (May 2013), [http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN\\_Bulletin\\_23CRc\\_051413.pdf](http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN_Bulletin_23CRc_051413.pdf)
10. Career categories were based on a course classification system known as SCED (School Courses for the Exchange of Data) and aligned with the 16 Career Clusters designed by the Office of Career, Technical, and Adult Education. Some of the categories have been collapsed in order to maximize alignment, but these broader categories also make it easier to meet the career-ready requirements.

11. Saul Geiser and Maria Veronica Santelices, "Validity of High-School Grades in Predicting Student Success Beyond the Freshman Year: High-School Record Versus Standardized Tests as Indicators of four-Year College Outcomes," (Berkeley, California: Center for Studies in Higher Education, 2007), <http://files.eric.ed.gov/fulltext/ED502858.pdf>.
12. All results have been weighted (using W3W1STUTR) to make the findings representative of the student population. All reported differences are significant unless otherwise noted, using a p-value of 0.05 to determine significance.
13. Exact percentages are 9 percent for white and black students and 7 percent for Latino students. These differences are not statistically significant.
14. The difference rounds to 14 percentage points.
15. Of students who missed one requirement, 34 percent missed the math requirement. Two percent did not take enough math credits, and 32 percent missed the algebra II requirement. Students who took a full credit of integrated math were counted as having met this requirement.
16. Clifford Adelman, "The Toolbox Revisited: Paths to Degree Completion from High School Through College," (Washington, D.C.: U.S. Department of Education, February 2006), <https://www2.ed.gov/rschstat/research/pubs/toolboxrevisit/toolbox.pdf>.
17. For this analysis, we've examined the highest math course the student took in ninth grade.
18. Of students who missed only one requirement, 29 percent took fewer than two foreign language credits, whereas only 2 percent took courses in different foreign languages.
19. Peter A. Conforti, "What is College and Career Readiness? State Requirements for High School Graduation and State Public University Admissions," *Pearson Bulletin* 23 (May 2013), [http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN\\_Bulletin\\_23CRc\\_051413.pdf](http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN_Bulletin_23CRc_051413.pdf)
20. "Closing the Expectations Gap: 2014 Annual Report on the Alignment of State K-12 Policies and Practice with the Demands of College and Careers," (Washington, D.C.: Achieve, Inc., January 2015), <http://www.achieve.org/publications/closing-expectations-gap-2014>. Note that a few local control states technically require no credits, as districts are responsible for making decisions related to graduation requirements.
21. This includes students who took the college-ready curriculum or no cohesive curriculum.
22. Camille A. Farrington, *Failing at School: Lessons for Redesigning Urban High Schools*, (New York, New York City: Teachers College Press, 2014).
23. Melissa Roderick, *et al*, "Preventable Failure: Improvements in Long-Term Outcomes When High Schools Focused on the Ninth Grade Year," (Chicago, University of Chicago Consortium on Chicago School Research, April 2014), <https://consortium.uchicago.edu/publications/preventable-failure-improvements-long-term-outcomes-when-high-schools-focused-ninth>.
24. For measures of college readiness, we've examined students' core GPAs, which include English, math, social studies, and science courses. This GPA is not perfectly aligned with our college-ready curriculum measure, as it does not include foreign language courses, but it provides a proxy measure of academic course mastery. For measures of career readiness, we've examined students' GPA in CTE coursework. These are the courses that make up all CTE concentrations, so they could include courses that comprise a career-ready sequence as well as other CTE courses that students may have taken. We selected a GPA of 2.5 to measure average performance, but prior research suggests that a 3.0 is even more aligned with college persistence.
25. Aspirations are determined from a survey question asking how far in school students think they'll get. For a small number of students who did not respond to this question in their junior year but responded in their freshman year, their earlier response has been imputed and reported here.
26. Arthur Powell, Eleanor Farrar, and David Cohen, *The Shopping Mall High School: Winners and Losers in the Educational Marketplace*, (Boston, Houghton Mifflin, 1985).

## **ABOUT THE EDUCATION TRUST**

The Education Trust promotes high academic achievement for all students at all levels, pre-kindergarten through college. We work alongside parents, educators, and community and business leaders across the country in transforming schools and colleges into institutions that serve all students well. Lessons learned in these efforts, together with unflinching data analyses, shape our state and national policy agendas. Our goal is to close the gaps in opportunity and achievement that consign far too many young people — especially those who are black, Latino, American Indian, or from low-income families — to lives on the margins of the American mainstream.



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# May Meeting Materials




## Career Forward Task Force

### Agenda

May 25, 2016

*Light Breakfast - (Optional) starting at 8:15am*

- |       |   |            |
|-------|---|------------|
| I.    | <i>Review of Key Discussions &amp; Overview of Today</i><br>Dr. Candice McQueen<br>TN Commissioner of Education   | 8:30 a.m.  |
| II.   | <i>The Life of a Ready Student: What We Know and Don't Know</i><br>Jonathon Attridge<br>Division of Data & Research, TDOE   | 8:45 a.m.  |
| III.  | <i>Break</i>  | 9:30 a.m.  |
| IV.   | <i>Programs, Assessments and Supports: Towards a Ready Student</i><br>(Readiness Series, Part II)<br>Dr. Nakia Towns, Asst Commissioner Data & Research, TDOE<br>Debra Lyons, Sr. Dir., Workforce Advancement, ACT<br>Casey Haugner Wrenn, Exec. Dir. Early Postsec & Student Readiness, TDOE | 9:45 a.m.  |
| V.    | <i>Student Panel: One Year Out – Student Preparation and Transition</i><br>Facilitated by: Commissioner McQueen   | 10:45 a.m. |
| VI.   | <i>Lunch Break</i>  | 11:30 a.m. |
| VII.  | <i>Small Group Discussion</i>   | 12:00 p.m. |
| VIII. | <i>Circling Back</i><br>Commissioner McQueen  | 12:55 p.m. |
| IX.   | <i>Dismissal</i>  | 1:00 p.m.  |




## CAREER FORWARD TASK FORCE

May 25, 2016


### CHARGE: CAREER FORWARD TASK FORCE

- Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
- Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.

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### GUIDING QUESTIONS

1. How do we know when a student is “career ready” at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state's economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

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### HIGH LEVEL TAKEAWAYS - SO FAR

- “Career Ready” must be meaningful, rigorous and relevant for students and must align with employer needs and occupational opportunities.
- Employer engagement in a student's learning lifecycle must be robust and diverse, enhancing and assuring what occurs in the classroom and vice versa.
- There are multiple learning models, approaches and experiences that can inflect the development of ready student. But which ones are the right ones, and how should they be promoted? *(We will hear and learn of more today.)*
- Federal legislation can be a game changer for states who commit to leveraging shared focuses.
- Student readiness measures can't predict student success if they are not aligned process-wise and outcome-wise.

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### FOCUS OF MAY GATHERING

- I. THE LIFE OF A READY STUDENT: WHAT WE KNOW AND WHAT WE DON'T KNOW
- II. STUDENT PROGRAMS, ASSESSMENTS AND SUPPORTS (Readiness Series)
- III. STUDENT PANEL
- IV. LUNCH BREAK
- V. SMALL GROUP DISCUSSION: PREPAREDNESS, READINESS, SUCCESS (What is going well? What is missing? What can be better?)
- VI. CIRCLING BACK & DISMISSAL

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### AREAS OF FOCUS/REMAINING MONTHS

**March:**  
Kickoff: focused on Charge and Setting the Stage; high level review of Interconnectedness of Education, Industry, and Career Choices

**April:**  
Review of Federal Acts and State Approaches around Education, Labor and Industry; Begin defining a “Ready Student” by review of TN's secondary/postsecondary CTE and Work-Based Learning


**May:**  
Defining a “Ready Student,” using Data; Approaches Used to Move a Student to Readiness; Student Voices on Readiness and Transitions

**June**  
Structures and Systems: existing Strengths, Alignments, Barriers, Gaps, Culture/ Perceptions, Plans and Models of Practice at Local, Regional, State Levels; Defining a *College and Career Ready Student*

**July:**  
ROI of Education-Industry Partnerships, New Approaches to Data Collection, Evaluation, and Assessment to Ascertain “Ready Student;” Sustainability Issues

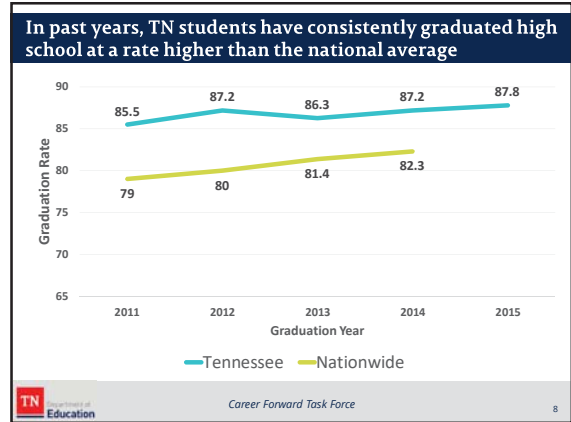
**August:**  
Discuss Identified Overarching Principles and Recommendations; Gain Sign Off

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## TRACKING STUDENT TRAJECTORIES OVER TIME

Jonathon Attridge | Research and Strategy Office | May 25, 2016



Despite successfully moving through high school, TN's students are less likely than peers to enroll in postsecondary

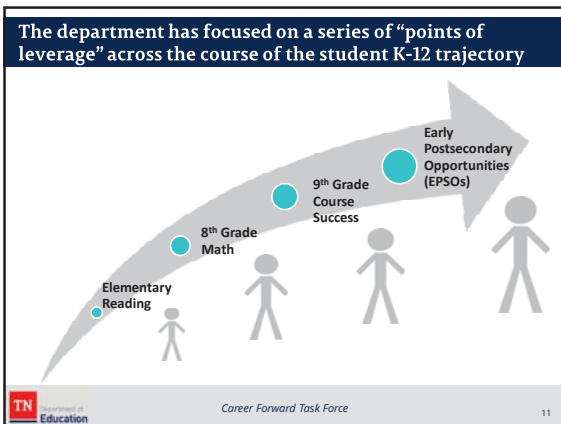

- Tennessee lags behind the nation in college matriculation following high school graduation
  - Tennessee: 58% of the 2014 graduates
  - Nation: 66% of the 2014 graduates
- We have seen promising increases in the 2015 class
  - Tennessee: 62.5% of the 2015 graduates **(+4.5%)**
  - Nation: 69.2% of 2015 graduates **(+3.2%)**
- New ECD report highlights economic advantage
  - Relative to high school graduate, an associates degree holder earns \$5,941 more per year and a bachelor's degree holder averages \$18,860 more per year

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TODAY'S PLAN

- College and Career Readiness is the progression that begins at home and develops as students progress through secondary into postsecondary into the workplace.
  - Keeping students **on track**
  - **Catching up** students who fall behind

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## THE CHALLENGE OF ELEMENTARY READING IN TENNESSEE

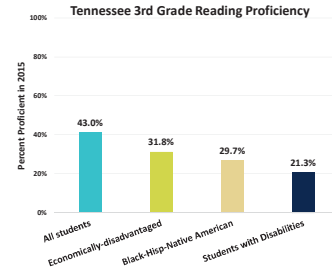
## CHECKPOINT #1: THIRD GRADE READING

The majority of Tennessee students are not reaching reading proficiency by the end of third grade, and far too few of those students who have fallen behind catch back up over time.

## Checkpoint #1: Overall reading proficiency in Tennessee is low and achievement gaps are strikingly large

Fewer than half of all third graders read on grade level.

This number has not increased since 2010.



## While students can gain back lost ground with strong instruction, we are seeing too little catch-up in later grades

Less than **3 percent** of the almost 6,000 students rated below basic in ELA in 3<sup>rd</sup> grade attained proficiency by the end of 5<sup>th</sup> grade.

Only **8 percent** of 8<sup>th</sup> graders below grade level in Reading reach the ACT college-ready benchmark.



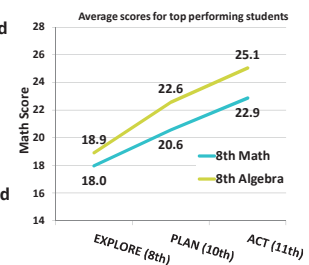
## EIGHTH GRADE MATH

## CHECKPOINT #2: MATH COURSE TRAJECTORIES

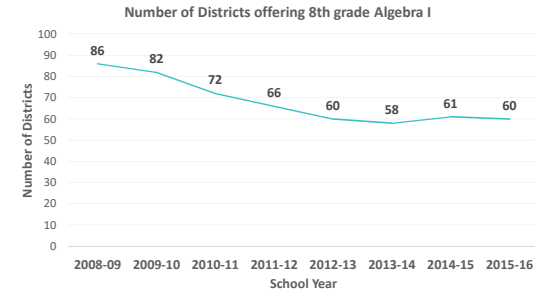
The opportunities that students have in 8<sup>th</sup> grade course-taking directly affect later course trajectories and academic success, but most districts aren't offering prepared students the opportunities in math that will pay off later on.

## 8<sup>th</sup> grade Algebra I impacts achievement and future course options

- Seventy percent of the students taking advanced mathematics courses (above Algebra II) took Algebra I in 8<sup>th</sup> grade
- Similarly achieving students who took Algebra I instead of 8<sup>th</sup> grade math outperformed their peers on Explore. This gap increases over time



**But most prepared students do not have the opportunity to take Algebra I in 8<sup>th</sup> grade**

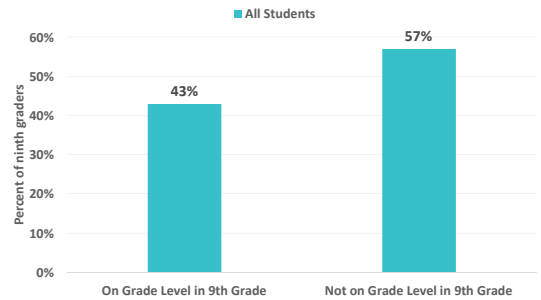


**NINTH GRADE READINESS**

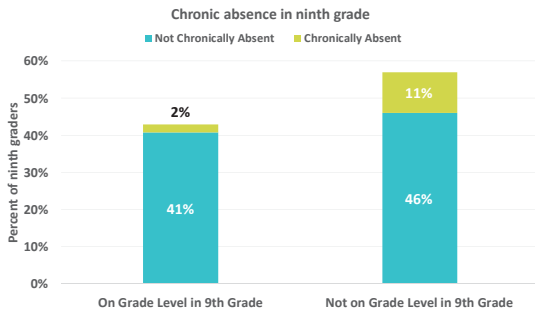
**CHECKPOINT #3: NINTH GRADE READINESS**

By ninth grade, student success in core ninth grade courses is highly predictive of high school and postsecondary student pathways

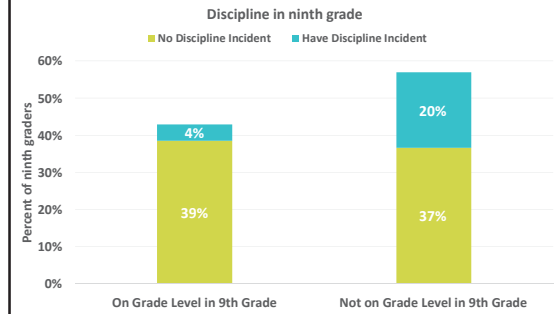
**Checkpoint #3: By 9<sup>th</sup> grade, course taking patterns can identify students who display signs of disengagement**



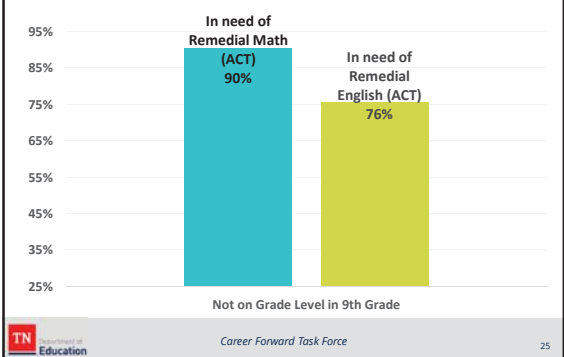
**Checkpoint #3: By 9<sup>th</sup> grade, course taking patterns can identify students who display signs of disengagement**



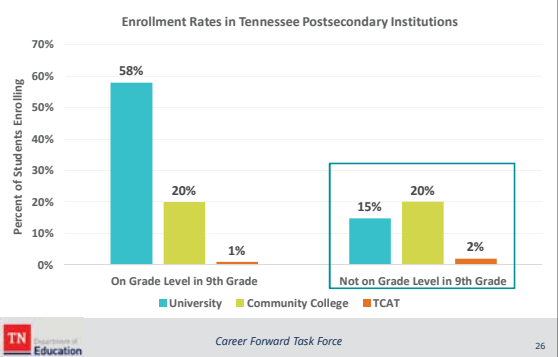
**Checkpoint #3: By 9<sup>th</sup> grade, course taking patterns can identify students who display signs of disengagement**



### Nearly all students who were behind in 9<sup>th</sup> grade also perform poorly on the ACT



### These students also enroll in postsecondary institutions at startlingly low levels at all levels



## EARLY POSTSECONDARY OPPORTUNITIES

### The following five courses are the most common EPSOs in Tennessee

	IB, (13 recognized schools)	Local Dual Credit	Statewide Dual Credit	Advanced Placement	Dual Enrollment
Description	Courses offered at high schools that are authorized IB schools	High school courses that are aligned to standards at local/partner PS institutions	High school course aligned to statewide PS standards with required challenge exam.	College board developed courses and exam offered in multiple subjects that are college level	Postsecondary course taught at PS institution, high school, or online
Structure	Course and Exam	Course and Exam	Course and Exam	Course and Exam	Course
Postsecondary Credit Determinant	IB SL or HL exam scores	Challenge exam score	Challenge exam score	Exam score	Course completion
Postsecondary Credit Award	Individual institutions (Not available)	Only partner institutions (Not available)	All TN public PS institutions	Individual institutional decisions	All TN public PS institutions

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### CHECKPOINT #4: EPSOs

Despite widespread access, too few students are taking advantage of Early Postsecondary Opportunities. Less than half of "College Ready" students earn an EPSO credit

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### Checkpoint #4: Too few students are taking EPSOs

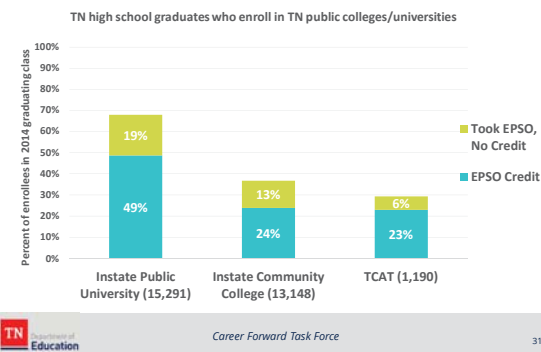
While 80% of high schools offer some early postsecondary opportunity, only 40% of students graduate high school with any early postsecondary credit

Only 55% of students who scored above ELA benchmark on PLAN attempted EPS course credit

Students who are not Economically Disadvantaged are over twice as likely to take an EPS course or exam

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## Half of public university enrollees matriculated with EPSO credits



## FINAL THOUGHTS

Proactively **keep students on track** and proactively identify students who are falling behind their peers and **provide personalized supports to catch up**.

Limited by what we know and don't know while provided with opportunities to break down barriers

- Focus on course access and course taking
- WBL/industry certifications
- Proxies for grit, persistence, soft skills

Readiness is not unidimensional

- Not working toward a discrete finish line

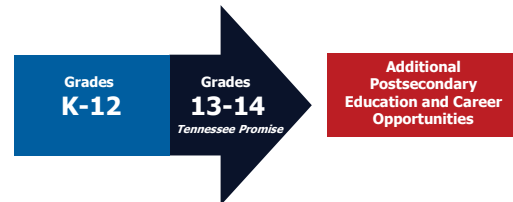
What systems and structures can we define to support ALL students in all schools throughout their education trajectory?



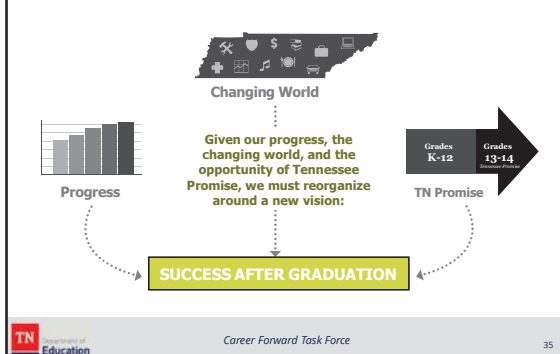
## STUDENT ASSESSMENTS

## Tennessee Promise Extends our Public Education System

### Free, Public K-14 System



## How do we ensure our students are on-track for success?



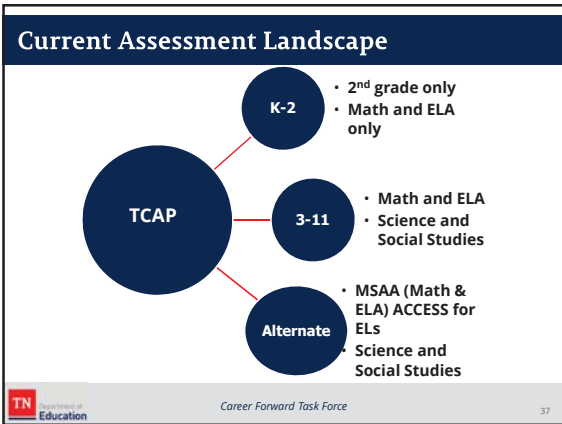
## TCAP Assessment Transition

### Goals

- Better information about postsecondary readiness
- Full alignment to depth and breadth of standards
- Tennessee-specific test

### Key differences between old and new TCAP

- Variety of test item types to measure higher order thinking
- More rigorous expectations for proficiency
- Greater transparency via practice tools and assessment blueprints
- Option for online administration



- ### Current Assessment Landscape
- **Grade 2 (optional)**
    - ELA and Math
  - **Grades 3-11**
    - Math
      - Math 3-8
      - Algebra I, Geometry, Algebra II
      - Integrated Math I, II, III
    - ELA
      - ELA 3-8
      - English I, II and III
        - Writing incorporated in TNReady
  - **Grades 3-11 (continued)**
    - Science
      - Science 3-8
      - Biology, Chemistry
    - Social Studies
      - Social Studies 3-8
      - US History
  - **Alternate Assessments**
    - MSAA (ELA and math)
    - ACCESS for ELs
    - Science and Social Studies
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### Why is ACT/SAT an important measure of student performance in Tennessee?

- TNReady and ACT/SAT serve different purposes

TCAP EOC	ACT/SAT
<ul style="list-style-type: none"> <li>• Tennessee-specific annual test</li> <li>• Questions in multiple formats (i.e., multiple-select items, writing, and evidence-enhanced selected-response items),</li> <li>• Taken in two parts for ELA</li> <li>• Assesses depth of knowledge and understanding of grade-level or course</li> </ul>	<ul style="list-style-type: none"> <li>• National benchmark assessment for college and career readiness</li> <li>• Provides a snapshot of a student's K-12 academic career</li> <li>• Assesses students' cumulative knowledge from grades K-12</li> <li>• Survey level assessment consisting of multiple-choice tests including English, reading, mathematics and science reasoning</li> </ul>

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### Why is ACT/SAT an important measure of student performance in Tennessee?

ACT/SAT is an important metric to track our progress towards our strategic plan priorities

- TDOE Goals 2 & 3 reflect ACT/SAT performance
- TDOE Priority Area: Strategic High School Bridge to Postsecondary

This measure is important for students as a terminal assessment that provides a gateway to postsecondary institutions

- Admissions
- Scholarship eligibility
- Course placement decisions

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### Why is ACT/SAT in Accountability?

State law (T.C.A. 49-6-6001) effective July 1, **2007**:

- Districts are required to administer a postsecondary readiness assessment to **all eleventh grade** students
- Historically, Tennessee has administered the ACT as a measure to assess college readiness in the *eleventh grade*. SAT is an equivalent measure and also allowed

Graduation Rate has steadily increased, as ACT/SAT scores have been stagnant

- We must ensure that the **quality** of graduates – meaning the skills and competencies they demonstrate – is also improving
- Incorporating ACT/SAT in accountability is a strategy to ensure that we go **beyond credit attainment** as a culminating measure of K-12 education

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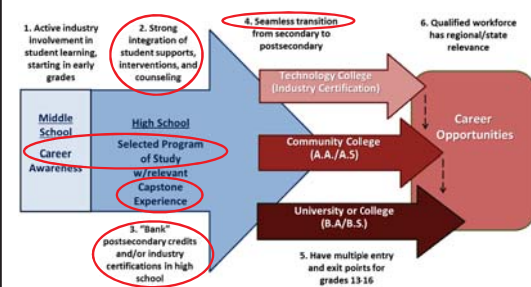


## OBJECTIVES

Taskforce members will understand the major components and strategies of our current pathway approach to supporting effective student K-14/16 transitions

- Student Planning
- Capstone Experiences
- Early Postsecondary Opportunities
- School Counseling
- Effective Student Transitions

## EFFECTIVE K-14/16 STUDENT PATHWAY



## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

1. Student Planning
2. Capstone Experiences
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## STUDENT PLANNING

### Where We Are:

- Official requirements for career interest inventories are listed in Tennessee Code Annotated and State Board Policy
- **T.C.A. § 49-6-412:** Requires all 6-9 grade students to take an interest inventory to "assist students in determining their interests and in making career decisions."
  - Specifically lists: Kuder, Myers-Briggs, ASVAB, EXLOPRE (ACT) and MyRoad (College Board)
  - Summary data is required annually to be sent to the state board to be used in curricula decisions
- **Tennessee State Board:** All students are required to have a **focused plan of study**, developed for high school prior to ninth grade. The plan should be reviewed annually using results from "various types of assessments."

## STUDENT PLANNING

### Comprehensive interest inventory resources available - sampling

- **ACT Profile:** free, high school resource
- **CollegeforTN.org:** free, customizable resource for all students
- **Kudor:** elementary through high school resource
- **ASVAB:** high school resource, military focus
- **Myers-Briggs:** personality inventory, not career-specific
- **MyRoad:** high school resource, free for students taking the PSAT/SAT

## STUDENT PLANNING

### Our Belief/Vision:

- Earlier career interest inventory and planning activities benefit students in middle school and high school
- Student Plans should be reviewed and updated annually to reflect changes in student interests, goals, and available opportunities
  - Revisiting the career interest inventory in high school would ensure students take advantage of appropriate elective courses, EPS courses and capstone activities

## STUDENT PLANNING

### Existing Challenges:

- Outdated and confusing language in code
  - Mismatch or unavailability of listed assessments
  - Does not encourage re-testing or revising of plans
- No funding at state level dedicated to non-cognitive testing
- Limited statewide guidance on how to incorporate student strengths, interests into high school planning
- Current state board policy may not reflect strongest practices:
  - Only requires planning to begin prior to 9<sup>th</sup> grade year (rather than earlier, to impact middle school course-taking) and end in 12<sup>th</sup> (rather than postsecondary)
  - No requirement to revise/update plan annually based on specific information (“review” is term used in policy)
  - No requirement to use consistent resource/assessment

## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

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## CAPSTONE EXPERIENCES

### Where We Are:

#### Tennessee State Board:

- High school policy “encourages” LEA’s to “consider requirements for students to complete a capstone experience”
- Graduating students are able to qualify for “state distinction”

**TN Department of Education:** Revision of (1) CTE courses and (2) CTE programs of study, (3) early postsecondary opportunity portfolio, and (4) work-based learning (WBL) framework over past 3 years has created the following:

- Clear expectations for culminating WBL or Practicum course (CTE, Special Education, General Education)
- Opportunities to earn aligned, transferable industry certifications
- Eight different ways to earn college credit while in high school

## CAPSTONE EXPERIENCES

### Our Belief/Vision:

- All districts should offer capstone experiences aligned with local and regional workforce opportunities and offered postsecondary programs
- All students graduate high school with more than just a high school diploma
  - Practice and demonstration of real world skills
  - Work-based learning
  - Early postsecondary opportunities
  - Industry certifications

## CAPSTONE EXPERIENCES

### Existing Challenges:

- Districts are not obligated to offer or require capstone experiences for all students
- Schools and/or districts are not rewarded/recognized for the number of students who complete capstone experiences
- Gaps exist in student capstone course taking patterns (ethnic background, socioeconomic status)
- Logistical and administrative barriers, such as transportation, funding and liability concerns
- Many students are not progressing fully along a learning pathway in order to be prepared for a capstone opportunity – perception is not for all students

## EFFECTIVE K-14/16 STUDENT PATHWAY

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## EARLY POSTSECONDARY OPPORTUNITIES

An early postsecondary opportunity (EPSO) is a course and/or exam that allows a high school student to obtain credits or hours recognized by a postsecondary institution

Early postsecondary opportunities allow students to:

- Become familiar with postsecondary expectations
- Develop confidence and skills for success in postsecondary
- Make informed postsecondary and career decisions
- Decrease the time and cost of completing a certificate, credential, or degree

## Early Postsecondary OPPORTUNITIES

- Dual Enrollment ————— Course ————— Local Institution
- Local Dual Credit ————— Course & Exam ————— Multiple Institutions
- Statewide Dual Credit
- Advanced Placement (AP)
- International Baccalaureate (IB)
- Cambridge International
- College Level Examination Program (CLEP) ————— Exam ————— Multiple Institutions
- Capstone Industry Certification

## EARLY POSTSECONDARY OPPORTUNITIES

### Where We Are:

- Tennessee students have greater access to postsecondary through *TN Promise*
- Research shows that students who participate in early postsecondary courses are more likely to enroll and persist in postsecondary

### Our Belief/Vision:

- All high schools offer a diverse **portfolio** of early postsecondary opportunities (EPSO) for students
- All students have an opportunity to earn postsecondary credits/hours or transferable industry certifications while in high school

## EARLY POSTSECONDARY OPPORTUNITIES

### What is a EPSO "Portfolio" approach?

- Offering a variety (3-4) of types every school year
- Options for all students, regardless of background, differentiated by:
  - Student interest and pathway
  - Student postsecondary aspirations
  - Student knowledge, skills and abilities
  - Student support needs (financial, access, transportation, etc.)

Example EPSO	Example Student Background & Goals
Advanced Placement (AP): Calculus	<ul style="list-style-type: none"> <li>• 4-year universities, STEM fields</li> <li>• Strong knowledge of college access and financial resources</li> </ul>
Dual Enrollment at local CC: College Algebra	<ul style="list-style-type: none"> <li>• Transfer pathways in TN 2- and 4-year schools, STEM and liberal arts fields</li> <li>• Knowledge of college access, financial resources</li> </ul>
Statewide Dual Credit: Pre-Calculus, Statistics	<ul style="list-style-type: none"> <li>• Transfer pathways in TN 2- and 4-year schools, STEM and liberal arts fields</li> <li>• Possibly limited knowledge of college access, financial resources</li> </ul>
Capstone Industry Certification Exams	<ul style="list-style-type: none"> <li>• Technical colleges and training programs</li> <li>• Desire to work while continuing their learning</li> </ul>

## EARLY POSTSECONDARY OPPORTUNITIES

### Existing Challenges:

- No uniform statewide EPSO acceptance policy across TN postsecondary systems/campuses
- Updating SBE uniform grading policy
- Limited funding for statewide EPSO expansion, piloting efforts
- Low numbers of eligible students taking advantage of EPSO courses/exams
- Low pass rates in some subjects
- Gaps in course- and exam-taking by student background
- Schools and districts are not required to offer or are being rewarded/recognized for EPSO offerings and pass rates
- Logistical and administrative barriers, such as transportation, funding and liability concerns

## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

1. Student Planning
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5. Effective Student Transitions



## SCHOOL COUNSELING

### Where We Are:

Roles and responsibilities for school counselors are outlined in **T.C.A. § 49-5-302** and State Board of Education policy and rule.

State Board adopted counseling framework and standards have not been updated since 2005

Originally based on national model of school counseling from American School Counseling Association (ASCA)

Three domains of student development



HOW: needs, data

WHAT: Student planning, curriculum, services

IMPACT: evaluations, results

WHY: goals, standards



Source for graphic and more information: <http://schoolcounselor.org/fasca/media/fasca/ASCA%20National%20Model%20Template/ANMExecSumm.pdf>

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## SCHOOL COUNSELING

**Our Belief/Vision:** All schools have effective, comprehensive school counseling programs

Goal	Actions
Develop an Effective Communications Plan	<ul style="list-style-type: none"> <li>Launched <i>School Counselor Connection</i> bi-weekly digital newsletter</li> <li>Begin revision of state website content</li> </ul>
Create a School Counseling Advisory Council	<ul style="list-style-type: none"> <li>Announcement of Advisory Council in early March</li> <li>Advisory Council meetings in April, July, September of 2016</li> </ul>
Revise Tennessee Counseling Standards and Model of Practice	<ul style="list-style-type: none"> <li>Gathered counselor feedback from various meetings/conference</li> <li>Regional meetings to review first draft in April/May</li> <li>Prepare for State Board first reading in July, final reading October</li> <li>Training and rollout of new standards and model Fall 2016, Summer 2017</li> </ul>
Share Strong Practices from the Field	<ul style="list-style-type: none"> <li>School Counselor Spotlight in newsletter</li> <li>Test Anxiety Toolkit, FAFSA Frenzy Toolkit</li> <li>Collaborating with THEC to use CollegeforTN.org to house best practices</li> </ul>
Provide Robust Professional Development	<ul style="list-style-type: none"> <li>SCALI &amp; TCA</li> <li>Regional counselor collaboratives (launching this year in 2 regions)</li> <li>High School Counselor Mini-Conference, Institute for CTE Educators</li> </ul>



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## SCHOOL COUNSELING

### Existing Challenge: Student/Counselor Ratios

- Approximately **2,200** counselors working in **142** systems
- On average, each counselor serves about **465** students
- Schools are BEP funded at the following ratios:
  - Elementary grades (K-6): funded at 500:1
  - Secondary grades (7-12): funded at 350:1
- 75 districts have higher than recommended ratios
- ASCA recommends a ratio of 250:1**



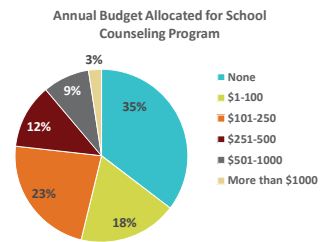
\*BEP handbook [http://www.tennessee.gov/asssets/entities/sbe/attachments/BEPHandbook\\_revised\\_March\\_2016.pdf](http://www.tennessee.gov/asssets/entities/sbe/attachments/BEPHandbook_revised_March_2016.pdf)

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## SCHOOL COUNSELING

### Existing Challenge:

- Not enough counselors to adequately support and advise students
- Most counselors receive little to no money to implement comprehensive support and advising programs



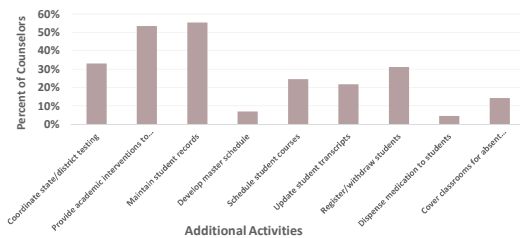
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## SCHOOL COUNSELING

### Existing Challenge: Non-counseling activities

Counselors report spending too much time on non-counseling responsibilities



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## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

- Student Planning
- Capstone Experiences
- Early Postsecondary Opportunities
- School Counseling
- Effective Student Transitions



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## EFFECTIVE STUDENT TRANSITIONS

### Where We Are:

- Only basic working definition of “readiness”
- Internal cross-divisional team to identify different approaches to determining if students are progressing appropriately
  - Identify important inflection points along K-13 pathway
  - Justify why these inflection points are important
  - Identify and define characteristics of a student at these points
  - Align data to assess current and predictive success of student
- Support districts in their support all students progressing and succeeding
- Available communications channels: report card, dashboards, integration with Response to Instruction and Intervention (RTI<sup>2</sup>) framework

## EFFECTIVE STUDENT TRANSITIONS

Multiple congruent efforts at TDOE that include expanding from academic standards only:

- Kindergarten readiness screener
- Early Literacy, 3<sup>rd</sup> Grade Reading Proficiency definition
- Expansion of RTI<sup>2</sup> Framework to RTI-B (behavior)
- Inclusion of literacy and “practice” standards into academic standards revisions
- Social and emotional learning
- School culture and climate
- Revision of school counseling standards

## Effective Student Transitions

### Our Belief/Vision:

- Ensure districts can support ALL students individually toward success and have tools to effectively assess needs and intervene appropriately
- Provide districts with guidance on how to identify and use their student data in order to better support student progression
  - Data-driven decision making methodology for each individual student that does not promote tracking or high-stakes gateways
- All stakeholders have clear understanding of an approach to success for students and how to get there

## EFFECTIVE STUDENT TRANSITIONS

Standard Focus	Measuring & Reporting Through Standards	Measuring & Reporting Through Middle School	Measuring & Reporting Through High School	Measuring & Reporting Through Postsecondary
Academic	Measuring the growth of students' academic skills and knowledge through standardized tests and other assessments.	Measuring the growth of students' academic skills and knowledge through standardized tests and other assessments.	Measuring the growth of students' academic skills and knowledge through standardized tests and other assessments.	Measuring the growth of students' academic skills and knowledge through standardized tests and other assessments.
Social & Emotional Development	Measuring the growth of students' social and emotional skills through standardized tests and other assessments.	Measuring the growth of students' social and emotional skills through standardized tests and other assessments.	Measuring the growth of students' social and emotional skills through standardized tests and other assessments.	Measuring the growth of students' social and emotional skills through standardized tests and other assessments.
Postsecondary Readiness	Measuring the growth of students' postsecondary readiness skills through standardized tests and other assessments.	Measuring the growth of students' postsecondary readiness skills through standardized tests and other assessments.	Measuring the growth of students' postsecondary readiness skills through standardized tests and other assessments.	Measuring the growth of students' postsecondary readiness skills through standardized tests and other assessments.
Industry Specific	Measuring the growth of students' industry-specific skills through standardized tests and other assessments.	Measuring the growth of students' industry-specific skills through standardized tests and other assessments.	Measuring the growth of students' industry-specific skills through standardized tests and other assessments.	Measuring the growth of students' industry-specific skills through standardized tests and other assessments.

## EFFECTIVE STUDENT TRANSITIONS

### Existing Challenges:

- No comprehensive statewide definition of student readiness or student success along K-13 pathway
- Lack of collected non-cognitive data (beyond attendance and discipline)
- Initiatives at TDOE at times are implemented separately with schools and districts, and are not integrative or leveraged to promote a more holistic student progression
- Districts lack robust and cohesive guidance and tools to assess, intervene or promote students appropriately
- Student progression is still leaving many qualified students behind – need better, clearer approaches to identifying student capabilities and interests beyond simply a test score

## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

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## Career Forward Task Force Meeting Notes

Meeting Date: Wednesday, May 25

### Welcome from Commissioner McQueen, Tennessee Department of Education

- Reminder of the Career Forward Task Force charge:
  - Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
  - Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.
- Recap of the task force guiding questions.
- We also need to make sure that we are considering secondary, postsecondary, and business needs.
- We have data on whether students can pass tests, but we don't have information on whether students are responsible and have the transferable skills to be successful.
  - Employers want intelligent, academically gifted people who also have a good attitude, are problem solvers, are responsible, and ready to show up on time.
- High-level takeaways from previous meetings:
  - "Career-ready" must be meaningful, rigorous, and relevant for students.
  - Employer engagement in a student's learning pathway must be robust.
  - There are multiple learning models, but what are the right levers?
  - Federal legislation can be a game changer.
  - Student readiness measures cannot predict success if they are not aligned by both process and outcome.

### Tracking Student Trajectories Over Time by Jonathon Attridge, Research Analyst, Office of Research and Strategy

- 9 out of 10 students, who enter a Tennessee high school, graduate. We are outperforming the national average.
- When the class of 2014 left high school, 58 percent went on to attend a postsecondary institution. In 2015, 62.5 percent of students enrolled in postsecondary.
- Economic and Community Development studied student outcomes over time. A student with an associate's degree earns \$5,941 more per year and \$18,860 more per year with a bachelor's degree, compared to a graduate with only a high school diploma.
- Today's plan:
  - How to keep students on track and how to catch up students who are behind.
  - There are four major points of leverage:
    - 1) Elementary Reading
      - Early literacy is a priority of the department.

- The majority of Tennessee students are not reaching proficiency in reading, and too few who are behind are able to catch up. State standardized ELA assessment scores are stagnant across all grades.
  - Fewer than one in three economically disadvantaged students are reading on grade level.
  - Less than three percent of students who are below basic in third grade reach proficiency by fifth grade. Only eight percent of students who are below basic reach the ACT college ready benchmark in reading.
- 2) Eighth grade math course access
- Eighth grade is a critical time in a student's postsecondary/career planning.
  - Eighth grade Algebra I offering impacts achievement and future course options for those students who take it.
  - 70 percent of students who take advanced coursework in high school took Algebra I in eighth grade.
  - Of note, similar students academically – in seventh grade - faired differently on PLAN, EXPLORE and ACT, where the only difference was taking Algebra I in eighth grade.
  - Most prepared students do not have access to Algebra I in eighth grade- the number of districts offering this course option has decreased over time.
  - The number of Algebra I course offerings has declined perhaps due to supply of teachers and/or accountability. Task force members noted that standards change had an impact.
  - Commissioner McQueen: There were some disincentives built into the accountability model. We made corrections this year in the accountability model. U.S. DOE would not let students be double counted in eighth and ninth grade Algebra I, which led to a disincentive to offer higher level math in 8<sup>th</sup> grade.
  - High correlation between students who are behind on math being also behind on reading.
  - We can track how many students are in a course but not their preference or demand for courses.
  - The department is communicating with districts the changes in accountability.
- 3) Ninth grade course success
- Ninth grade is an important transition year for students, success in ELA and Algebra I is highly predictive of high school success.
  - 43 percent of ninth grade students were on grade level.
  - 11 percent of students not on grade level are chronically absent compared to 2 percent of students on grade level. Chronically absent

is missing 18 days or more in a school year. Suspensions are counted in chronic absences.

- The department has been thinking about exclusionary discipline. Four percent of students on grade level were suspended and 20 percent of students not on grade level were suspended. The majority of discipline incidents are due to violation of school rules.
  - Students who are suspended miss two days of school on average.
  - The department has attendance and behavior data available by student subgroup.
  - Nearly all students who were behind in the 9<sup>th</sup> grade also perform poorly on the ACT. We are remediating too late.
  - On track in ninth grade, 79 percent enroll in postsecondary compared to only 37 percent of students not on grade level (2014 graduating class). The data in this data set is the year before the promise data.
- 4) Early Postsecondary Opportunities (EPSO)
- We began the conversation about EPSOs with P-tech schools and Massachusetts presenters during the March meeting.
  - Menu of the top five EPSO options in Tennessee includes: International Baccalaureate (IB), Local Dual Credit, Statewide Dual Credit, Advanced Placement (AP), and Dual Enrollment (DE).
  - CTE is working on collecting industry certification data.
  - AP and DE are the most popular EPSOs.
  - 25 schools account for 50 percent of APs, dual enrollment is more pervasive.
  - Action item: Crosscheck if schools in AP Exam Fee Pilot program are the big AP schools.
  - While 80 percent of high schools offer EPSOs only 40 percent of students graduate with an EPSO credit. Only 55 percent who scored above an ELA benchmark on PLAN attempted an EPS course.
  - Students who are not economically disadvantaged are over twice as likely to take an EPS course. Financial barrier has largely been removed, so there are other factors.
  - We have anecdotal evidence that there is a tension with teachers between requirement and voluntary taking of assessments.
- Final thoughts
    - We need to keep students on track and proactively identify students who are falling behind and provide personalized supports.
    - We need to increase our access to data.
    - Focus groups have been happening with students across the state. One of the things that is most interesting is that students don't know what is offered at other schools.



- Learning and awareness means we can think about the systems and structures in place.
- Question: Can we look at policies that districts have in place around access, absenteeism, and discipline? For example: policies on supportive discipline with data.
  - Question: Why are students who score above readiness level on PLAN are not accessing EPSOs?
    - We are working on compiling that information right now.
  - Question: We have fixed the accountability problem for 8<sup>th</sup> grade math so what is being done on communications?
    - We have it in the new accountability model, districts gave feedback. Information is now trickling down, but we can talk about it more.
    - The department is offering an online blended learning pilot, we have room for 30 more teachers.
  - Students who struggle in ELA are harder to catch up than students who struggle in math. We are looking into a portfolio option for districts and 2<sup>nd</sup> grade screener. We need to address it early.
  - The lifecycle of a student starts in PK or K. We need to think holistically about how students are doing along the course of their career.

### **Student Assessments by Nakia Towns, Assistant Commissioner Data and Research**

- TNPromise has made a K-12 free public education system a K-14 system.
- Especially given TNPromise, we need to think through how we are preparing students.
- Goals of the new assessments: better information on postsecondary readiness, alignment, and TN input
- Key difference (from previous TCAPs): variety of test item types beyond multiple choice, rigorous expectations for proficiency (this year in high school we are setting cut scores), transparency with practice tools and blue prints.
- Current Assessment Landscape
  - Grades K-2 will offer a 2<sup>nd</sup> grade assessment, no longer SAT 10 for K-2. There will be a focus on literacy and numeracy
    - ELA balance of fiction and non-fiction texts, and have the ability to do short writing passages and editing, reading comprehension, fluency (reading in a couple of minutes and ask if a statement is true or false).
    - Math focus on numeracy
  - Grades 3-11: Math and ELA assessments. Multi-State Alternative Assessment (MSAA) for students which severe learning disabilities, ACCESS for English language learners
  - Working on updating science and social studies standards.
  - ACT/SAT
    - EOCs and ACT/SAT have different purposes. EOC is Tennessee-specific and measures the depth of knowledge for a particular grade level and content. ACT is a national benchmark; it is a snapshot of a cumulative career.
    - ACT/SAT play part of our TN Succeeds goals.

- ACT/SAT is being added to state accountability as it is listed in state law.
- As a state we have seen improvement with graduation rates, but not with aligned ACT/SAT scores.

### **Student Readiness by Casey Haugner Wrenn, Executive Director of Student Readiness and Early Postsecondary**

- Effective student pathways contain the following elements: EPSO, capstone experiences, integration with counseling, and seamless transitions. Selecting your pathway is important earlier than junior year.
- Student Planning
  - T.C.A. all middle school/ 9<sup>th</sup> grade students should take a career interest inventory. Summary data should be shared.
  - State board policy: students are required to have a focused plan of study for high school.
  - A lot of interest inventories are available, some free and some with cost.
  - Our belief/ vision: earlier career interest inventories can benefit students in middle and high school. Student plans should be reviewed and updated annually, and retaken in high school to align with career interests.
  - Challenges: students being mismatched with interests and achievements.
- Capstone Experiences
  - We want all students to have a capstone experience to practice and demonstrate their knowledge and skills in real-world setting.
  - Capstones are encouraged by state board. Graduating students are able to qualify for “state distinction.”
  - Our belief/vision: all districts should offer a capstone experience aligned with local and regional workforce opportunities.
  - Challenges:
    - districts are not required to offer capstones
    - gaps exist in course-taking patterns across different student subgroups (economically disadvantaged status, race, disability, etc), d, even with equal academic achievement
    - logistical barriers such as transportation, and
    - students aren't progressing along the pathway early enough to take advantage of capstone experiences.
- EPSO
  - EPSO opportunities allow students to become familiar with postsecondary expectations, develop confidence and skills, make informed decisions, and decrease time and cost in completing a degree.
  - There are eight types of EPSOs across the state. Some are a course, some are a course and an assessment, and some are just an assessment (capstone industry certification).

- Statewide dual credit is a great partnership between Tennessee secondary and higher education institutions, and is specific to TN.
- TN students, who participate in EPSOs, are more likely to enroll in postsecondary and persist in postsecondary.
- Our belief/vision: all high schools should offer a portfolio approach of early postsecondary opportunities, and all students who are ready should take advantage. If you are academically ready you should be taking advantage- access is not enough.
  - Portfolio: important as not all of our students look the same and have the same interests. It is important to provide EPSOs that match student academic levels and interests. For example: a student intending to enroll at a four-year university may want to take AP calculus, but a student interested in a Tennessee Transfer Pathway may want DE for college algebra.
- Challenges: no uniform EPSO acceptance policy across state (although uniformity across TBR institutions), limited funding for expansion, low numbers of students taking the exams, and low pass rates.
- School Counseling
  - TDOE has recreated the position of Coordinator of School Counseling, Leigh Bagwell is doing a great job.
  - We are not necessarily seeing alignment with law/policy and what counselors are doing on the ground. Counselor standards were last updated in 2005, we are working on updating now.
  - Academic, social and emotional, and college and career are the three counseling domains. College and career is getting less time in counseling preparation programs and in schools.
  - Our belief/vision: effective communications plan, create school counselor advisory council, revise standards, share strong practices from the field, and provide robust professional development.
  - Challenges: high student-to-counselor ratios, school counselor funding, counselors are being asked to do things that are not in their training.
- Student Transitions
  - TDOE has an internal team thinking through the appropriate student milestones and how to support districts in ensuring smooth transitions for students.
  - We want to make sure we are support districts in thinking through a holistic view of students.
  - Our belief/vision: ensure districts have tools to effectively assess needs and intervene appropriately.
  - Challenges: no definition of readiness, lack of non-cognitive data, initiatives at the TDOE are implemented separately and are not perceived to be integrated by districts.

### **WorkKeys by Debra Lyons, Sr. Workforce Advancement, ACT**

- Donna Mason is the ACT client relations manager for Tennessee

- Not a discreet finish line, data driven, and capstone are great things we have heard today
- National Career Readiness Certificate (NCRC) WorkKeys
  - Portable, industry recognized credential
  - Industry recognized, embedded in industry stackable credentials
  - 13,000 employers recognize NCRC nationwide
  - Focuses on: problem solving, critical thinking, locating information (read a graph and make an accurate decision).
  - Three assessments: applied math, locating information, reading for information. Those three skills are core in 80 percent of jobs.
  - 18 percent were at a gold level, ready to be trained for 93 percent of jobs in the country. Gold level is eligible for college credit.
- Career Readiness: the skills and proficiency levels needed for a specific career cluster
- ACT is working to create communities of work and career readiness
- 2020 Employment projects document provided
- Work Ready Communities
  - Aligning jobs into clusters
  - Initiatives in western and eastern TN: Caterpillar, Eastman Chemical
- Symposium in Nashville Sept. 19 and 20

### **Questions for Nakia Towns, Casey Haugner Wrenn, and Debra Lyons**

- What is TN's ACT/SAT compared to the nation?
  - Public school student average is 19.4, which is below the national average.
- Is there a comparison nationwide for TCAP/EOC?
  - There is not comparison as it is a state-specific test.
- Is EOC given more teaching time as most students don't go onto postsecondary?
  - We have a tiered approach to make sure students have what they need at each grade level and content area. The standards do prepare for the ACT but with a deeper individual assessment with our EOCs.
  - SAT/ ACT are not science or social studies content but more the skills.
  - TVAAS provides projections on ACT based on 8<sup>th</sup> grade TCAP scores. We are building projection models.
  - TN standards build up to the rigor.
- WorkKeys is a valuable tool, but there is a cost. How are districts and states funding it?
  - Some states are moving into a career readiness indicator coming out of high school. For example, Michigan and South Carolina. Chamber of Commerce and ECD have paid for students to take WorkKeys in some places.
- What's the cost of WorkKeys?
  - \$50 for a NCRC certificate, but depends on the pricing negotiated with each institution
- Is there plan to rewrite the word "encourages" in state board policy for capstones?
  - Legislation is used as the authority. State board is doing a comprehensive review right now. Would changing the word to mandatory lead to a cost than that could

- have a challenge. The taskforce should consider giving a recommendation on changing the wording.
- How many LEA's have a capstone?
  - About 80 percent offer EPSO, which is a capstone. This is a complex answer. For example, a transferable industry certification is considered a capstone.
- Industry certification? How do you determine that they are the ones valued by employers?
  - We first look at industry certifications available and then ask state and national industry partners if they are valued.
  - Second look, call industry members and TCATs to see alignment. Also look into postsecondary and where things are transferable.
  - We need to work on working more with our community college system.
- Important to keep an equity focus lens.
  - Our goal to raise standards is the biggest equity play we have made.
  - High school experiences look very different based on where students go to school. We want all of our students to be able to make their own choices.
- Commissioner: I get asked a lot why do you make all students take ACT? We do that for the equity question, we want to empower students to take the pathway of their choice, we need to be sure they are prepared, regardless of choice. Students need to be both college and career ready. That is what we are trying to determine. We do not want to go back to a system of tracking. We want to give students skills that are flexible.

#### **Student Panel moderated by Commissioner McQueen**

- Brooklyn Stephenson, Macon County High School, Volunteer State Community College, will transfer in TN tech
  - Bachelor in Nursing
- Juanita Gomez, Lebanon High School, TCAT Nashville
  - Majoring in Admin Office Technology Program
- Catherine English, Overton High School, Vanderbilt
  - Majoring in Secondary Education, Biology?
- America Leon, Overton High School, Nashville State Community College
  - Majoring in Photo Journalism?

How did your high school experience prepare or not prepare you? (America)

- At the beginning of high school, I was the student from the earlier slideshow who missed many days of school, and I was not prepared, not on grade level
- Junior year teachers had kept a close eye on and said they would prepare me for, and helped with what career I wanted to go into
- Now have options based on being prepared

How did your high school experience prepare or not prepare you? (Catherine)

- 10 AP classes and valedictorian
- At Overton didn't have to try but getting to Vanderbilt had to learn to study very quickly

- Not totally ready in other aspects outside of academics
- Teachers were extremely supporting and shared information, but I was not ready with study skills

How did your high school experience prepare or not prepare you? (Juanita)

- Did not feel ready at the TCAT
- As a Hispanic her parents didn't necessarily support her continuing her education
- Counselor helped to embrace and enlighten, suggested SkillsUSA
- TNPromise gave access to the finances

How did your high school experience prepare or not prepare you? (Brooklyn)

- High school was easy but wish I'd done DE
- Postsecondary was like a ton of bricks all at once

Did any of you take a CTE course? If so what was it?

- Catherine: In MNPS get freshman academies, I chose the engineering academy. I have always known I wanted to go into education but there was no academy. Basic skills from CTE and WBL are still there. Collaboration and problem solving are transferable skills.
- America: Information Technologies academy, worked on coding, building websites. It's not the field that I'm in but tech is advancing so rapidly. Photographers need experience with websites. I feel prepared, prepared for teamwork and real life. Hispanic women face the challenge of being a woman of color and knowing about coding it gives an empowerment.
- Juanita: Culinary Arts helps with preparing food and how you present yourself with others. It didn't help with postsecondary, CTE was more a just a class but not skills based help on going to college.
- Brooklyn: We had an elective focus, took family and parenting and child development as going into nursing. In FCCLA all four years of high school. Helped to work with children or people in general.

Did you have WBL or job shadowing?

- Catherine: LP building, day in a life an engineer. Further confirmed I did not want to be an engineer. Dr. Airhart toured and now I am an intern with the department.
- America: Journalism course had the opportunity to be senior editor. Worked with Nashville sounds, Tennessean. Narrowed that I wanted to do photo journalism. It lets you know if your interest aligns and eliminates changing pathways.
- Juanita: Didn't know about internships, didn't know if there was one. Job shadowed at high school. Job shadow as a sense of the workforce.
- Brooklyn: Seniors could do service-learning. I went to a daycare and a hospital. Helps prepare for see what you do and don't want to do. Help to see that I wanted to be a nurse.

Ann mentioned our high school students don't have as many summer jobs as they used to and so internships in school are more helpful. Did you have afterschool or summer jobs?

- Catherine: Two jobs
- America: Single mom and two younger siblings. Working since 6<sup>th</sup> or 7<sup>th</sup> grade. Catherine is part of the reason I graduated. I would come in tired working. Work 60 hours a week and go to school full time. Every day I say “my mom was not tired and got up and went to work so should I.” Every time we wake up and say we are going work hard today. Challenges won’t stop us. We want you to hear our voices. One educator told me I wasn’t going to go to college. You guys break my heart because I see that there are those who care. You don’t only care about the paycheck you care about making a difference.
- Juanita: Worked all through high school. Hispanic culture is a priority on working and better education. First in her family to pursue college. Worked to help her mom as she helped me. Would babysit teacher’s kids. Teachers want better for students as they know how you feel. Focus on work to help her mom. High school as a stepping stone to make more money.
- Brooklyn: Worked at sonic as a car hop. Hard to study and work at the same time. Made more appreciative of the things I have. Confident that I have better job and people skills due to the jobs.

If you were to give this group advice what could we do to better prepare students for college and career?

- Catherine: Don’t rely too much on what you are labeling things. If you just change the label it doesn’t change anything. Can’t just implement the same system and call it something different. Be aware of the limits of data and how far it can reach.
- America: This is the beginning. In my community many students don’t see hope. I am the only girl in my apartment doesn’t have a kid. I work with undocumented students who lose hope. Knowing that people are paying attention gives hope. Everything you do is amazing. It takes two teams, team 2 is the community, the parents. TN is becoming so diverse. Don’t be afraid of change. Get involved more with the community. Let’s have a town hall where more opinions are shared. Parents have to be involved as well. My mom was not supportive. My mom only came to the school at graduation. Students need to know that they have to do homework at home.
- Juanita: Get to know students by heart and by how they feel. Adults don’t know how much difference they can make. Teachers focus on students who already have an advantage and who are in clubs or honors classes. There needs to be more focus on those who have the challenges. Those who aren’t identified as “college material” and time isn’t put into them. All students can and should go into postsecondary. CTE needs to be communicated as a postsecondary avenue.
- Brooklyn: More studying techniques in high school. I learned from the failures but it would help to be prepared.

EPSO, what EPSOs did you take and did it help prepare you?

- Catherine: 10 AP courses over the course of high school. HS offered 12. Content wise the AP Statistics was the most transferable. Vanderbilt didn’t accept calculus so had to take it again.

Overton is now implementing Cambridge. Culture of the school was AP English language, DE, and standard English. Smart students were placed into AP, then next into DE, and then those who are left into standard. We were hearing it's about what students need and that was not communicated at the school level.

- America: Didn't know about opportunities for AP or DE, no one communicated that it was an option. No one said let's do a challenge. Need to give the option everyone not just smartest.
- Juanita: Teachers label students based on smartness or disciplined. No opportunity based on grades. Students could go farther based on their specific needs. Everyone can if they set their mind to it. Could have had more options.
- Brooklyn: DE was offered but didn't take it, wish I had.

How well planned do you think you were in high school for your pathway? Did you take a career inventory?

- Catherine: Yes, I took a career inventory. It said that I am good with people and numbers, which are on opposite ends of the wheel. Middle school saw counselor once. In high school went to see counselor every day. Helped talk through PLAN score and helped with academics. Gave AP options and talked through the plan and doing the socio-emotional part. Support doesn't want her to be teacher. This semester had to rely on people from high school to pull together when I needed them most.
- America: Never talked to about college. Middle school is now a charter school. Never met with counselor, never given opportunity. No plan in high school for classes, someone else picked. Freshman seminar helped for the rest of high school. Teachers have to find resources on their own. Became close friends with all counselors. Counselors and teachers need to work together, teamwork is important.
- Juanita: Middle school the focus is just getting to high school. High school just picked on my own. I thought a counselor was discipline focused. Middle school counselor didn't reach out or go to any classes. Junior year teacher reached out to each student.
- Brooklyn: Always knew I wanted to be a nurse. Goal make A's no B's and honors classes. Mom helped with course selection. In high school talked to counselor every day. In senior year she met with each student and gave personal cell phone number.

Commissioner: Theme: It's been very clear that students get experiences thinking about careers very late. Think through some recommendations around that.

### **James King, TCAT**

- Announced Sandra Timberlake as the TCAT winner for outstanding student
- Will be an ambassador for the state

### **Group Share Out**

Questions



- 1) What do you consider as the strengths or most promising components of approaches, programs, learning models, accountabilities, and funding models that you have heard in the promotion of a “prepared,” “ready,” and/or “successful” student?
- 2) What are gaps or barrier that you believe exist or have heard exist that are (maybe) inhibiting students, educators, districts, state?

Group 1	Group 2
<ol style="list-style-type: none"> <li>1) How do we get students to have ownership over their career path and the career monitoring piece? How do we get parents into the conversation?</li> <li>2) How can we make sure the plans are reviewed earlier on and consistently?</li> <li>3) Accountability can help be a good lever to show where we are going and how to get there. How can we ensure items get included?</li> <li>4) Class size and teacher shortage as a concern, especially thinking about EPSOs.</li> <li>5) How can we replicate the TN Achieves mentor system in the K-12?</li> <li>6) Longitudinal view of a student, what information do we bring back to the community for what students are doing afterwards</li> </ol>	<ol style="list-style-type: none"> <li>1) Wanting to integrated experiences for students (CTE, EPSO) and not track into disparate experiences.</li> <li>2) How can we get students exposed earlier?</li> <li>3) Within schools there are opportunity gaps that need to be addressed.</li> <li>4) How can we measure or show soft skills? Should there be work keys or a portfolio piece? At the state level there could be a rubric for graduation distinctions for example getting a commissioner’s distinction for getting an industry certification.</li> <li>5) Accountability is a strong signal that districts listen to.</li> <li>6) Counselors- change ratio to closer to national standards or look at how to spread out other responsibilities.</li> <li>7) Potential the way to use technology.</li> </ol>
Group 3	Group 4
<ol style="list-style-type: none"> <li>1) Counseling- could there be guidance on how to preserve counselors time?</li> <li>2) Strength- strong commitment to accountability and the assessment task force.</li> <li>3) What would it look like for an outcomes based K-12 funding model?</li> <li>4) WorkKeys- strong credential that should be recognized.</li> <li>5) EPSO/CTE- how do we ensure quality across the programs?</li> </ol>	<ol style="list-style-type: none"> <li>1) Counseling- identifying barriers and gaps. Communicating to students and prioritizing the neglected areas. Pre-identifying students who need help and having the career conversations earlier. Recommendation: Having a counselor follow students through their career. Having a mentor system similar to TN Promise. Addressing BEP and lowering counselor ration</li> <li>2) EPSO- overcoming access and equity and teacher staffing. Postsecondary offerings may be a challenge. Recommendation: connect back to counselor.</li> <li>3) ACT- WorkKeys as a supplement. Does it belong in secondary and or postsecondary?</li> <li>4) Capstone- connecting to transitions, utilizing labor programs and ECD. Making labor programs connect to high school requirements.</li> </ol>

### **Closing from Commissioner McQueen**

- What is the thing that if we all align to it that will help students the most? How do we make sure students are owning their data? Know the pathways? Bring their families into the conversations? And what do you need to do to keep students on track?
- Could we do a better job on requirements on that? Districts need to own it.
- Cameron Middle School used to be the lowest performing school in the state. Tim Webb struck a deal to make it the first public to private charter. Brought in a university model (Lipscomb). Lipscomb decided to put attention into teachers, two faculty mentors for each teacher. Teachers were given plans based on data and individualized pathways. School went from a level 1 to a level 5 based on owning their own data. This was low hanging fruit. Students also want help understanding where they are, where they are going, and their pathway. This is the larger conversation with the auxiliary important pieces such as counseling, BEP, and career interest inventories.
- The BEP review committee with the State Board of Education has listed counselors as a point of discussion.

Thank you for your time and engagement.

To: Members of the Career Forward Task Force

From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education

Date: May 25, 2016

**Subject: Follow-up from meeting on May 25, 2016**

### **Meeting Overview**

The third meeting of the Career Forward Task Force was held on May 25, 2016, at the First Amendment Center in Nashville, Tennessee. The purpose of the meeting was to (1) learn about the research on leverage (or transition) points that could indicate a postsecondary-, career-ready student; (2) examine TDOE programs and assessments focused on preparing a ready student; (3) learn about ACT's National Career Readiness Certificate; (4) listen to student perspectives on preparedness for the transition to postsecondary; and (5) discuss salient points from the day and how those can drive task force recommendations.

The meeting began with opening remarks from Commissioner Candice McQueen. Commissioner McQueen reviewed the charge of the task force and its guiding questions before discussing high level takeaways from previous meetings. The task force has been discussing that "career ready" must be meaningful, rigorous, and relevant to students and their interests while aligning with employer needs and occupation opportunities. Additionally, it should include active employer engagement, utilization of multiple learning models, leveraging federal legislation and funding, and prioritizing processes and outcome elements affiliated with student preparedness and readiness measures.

### **Tracking Student Trajectories Over Time**

Jonathon Attridge, Research Analyst in the Office of Research and Strategy, presented department research on four major leverage (transition) points that can be utilized to help prepare students in becoming postsecondary- and career-ready. Tennessee has made major strides in improving the graduation rate, (which is currently higher than the national average); however, we lag behind the national average for ACT score, students reaching the ACT college-ready benchmarks, and students enrolling in postsecondary. Jonathon highlighted that the data discussed today were designed to be viewed with the lens of "how can we support students who are on track" and "how to catch up students who are behind."

The four major leverage (transition) points discussed in Jonathon's research included elementary reading, eighth grade math, ninth grade course success, and early postsecondary opportunities.

- **Elementary Reading:** The department has begun a priority focus on early literacy in the strategic plan [TNSucceeds](#), and with the recently launched [Read to be Ready](#) campaign. Currently, 43 percent of Tennessee students are not reaching reading proficiency by the end of third grade, and only 3 percent of students scoring below basic in third grade attain proficiency by the end of fifth grade.
- **Eighth Grade Math:** Students who take Algebra I in eighth grade are able to take higher levels of math in high school and typically outperform comparable peers on national assessments of college and career readiness, such as ACT's EXPLORE, PLAN, and ACT. The number of districts offering this option to eighth grade students has steadily declined over the past

several years. However, the department has rectified an accountability element that was disincentivizing districts from offering eighth grade Algebra I, and so it is expected that there will begin an uptick in offerings.

- Ninth Grade Course Success: A ninth grader's success in English Language Arts and Algebra I is highly predictive of high school success. Students who pass both courses are viewed as "on track" and are much less likely to be chronically absent, have discipline incidents, and much more likely to attend postsecondary institutions. Students who failed one or more of these courses during their ninth grade year, typically also underscored on their ACT, identifying them for remediation.
- Early Postsecondary Opportunities (EPSOs): The five most offered EPSOs are international baccalaureate (IB), local dual credit, statewide dual credit (SDC), advanced placement (AP), and dual enrollment (DE). While 80 percent of high schools offer some early postsecondary opportunity, only 40 percent of high school students graduate with EPSO credit. Not all students who exhibit or show preparedness are taking advantage of the courses, especially economically disadvantaged students, who are enrolling in the courses at lower rates, even when controlled for other factors such as prior academic achievement.

Jonathon concluded by stressing the importance of proactively keeping students on track and preemptively helping students who are falling behind their peers and providing personalized supports to help them catch up. Discussion also centered on the use of predictive analytics to drive better student identification and placement.

### **Student Assessments**

Nakia Towns, Assistant Commissioner of Data and Research, updated the task force on changes to Tennessee assessments. TNPromise has shifted Tennessee from being a K-12 to a K-14 free public education system and the department's assessments are aligned with postsecondary preparedness. The new Tennessee assessment (TNReady) has been created to provide better information on postsecondary readiness, full alignment to standards, and are Tennessee-specific. Tennessee Comprehensive Assessment Program (TCAP) has a variety of question types in the assessments to push students beyond multiple choice questions. In grades K-2, there will be a second grade assessment for English Language Arts (ELA) and math only. In grades 3-11, students are assessed on ELA, math, social studies, and science.

Nakia summarized the differences between the ACT<sup>1</sup> and TNReady. The ACT is a nationally recognized, cumulative assessment spanning topics from grades K-12, whereas TCAP and End-of-Course (EOC) assessments are Tennessee-specific and assess the depth of knowledge and understanding of a grade-level course. ACT reading and science sections do not contain content knowledge but are skills-based. Nakia also shared that the ACT has been added to the state's accountability.

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<sup>1</sup> Per state law §49-6-6001, effective July 1, 2007, districts are required to assess student readiness to enter and succeed in postsecondary of all students in grade 11. Students may choose either the Act or SAT. Because all districts currently contract with ACT, the following are ACT-focused resources and supports only. For more information about ACT/SAT, please visit the department's website at <http://tn.gov/education/topic/act-sat>

## Student Readiness

Casey Haugner Wrenn, Executive Director of Student Readiness and Early Postsecondary, presented on the major components and strategies tied to the department's student pathways approach.

**Student planning** is required by the Tennessee Code Annotated (T.C.A.) and Tennessee State Board of Education (TSBE), but what is listed on a student's plan does not necessarily align with that student's current needs. We believe earlier career interest inventories and active reviewing are important for students, but currently the legislation is confusing, not promoted, and there is no funding. **Capstones** are currently "encouraged" in TSBE policy. However, we believe all districts should offer capstone experiences that align with career opportunities. Because these capstone experiences are not required, there are gaps in student capstone course taking patterns and experiences.

There are eight types of [early postsecondary opportunities](#) that help students become familiar with postsecondary expectations and making informed decisions. We believe that all high schools should offer a diverse portfolio of opportunities so that all students who are ready to do so have the opportunity to earn EPSO credit/hours. Currently, there is limited funding and there is no requirement or incentive to offer a portfolio of options. **School counseling** roles and responsibilities are outlined in TCA and TSBE policies. School counselors work in the three domains of academic development, social and emotional development, and college and career readiness. The department is developing currently a robust portfolio of elements to support our belief that all schools should have an effective, comprehensive K-12 school counseling program. Casey shared the department is working on initiatives ranging from creating a school counseling advisory council to revising the Tennessee school counseling framework and standards. Counselors are currently experiencing the challenges of high student-to-counselor ratios, while being asked to do tasks outside of their role and with limited funding. Lastly, the department is working on crafting a definition of effective **student transitions** and a series of supports such as a kindergarten screener; however, the department also acknowledges that it must overcome a lack of non-cognitive data, no statewide definition of student readiness, and a lack of existing guidance for districts that can better in successfully transitioning student throughout their K-12 (13) experiences.

## WorkKeys

Debra Lyons, Senior Workforce Advancement for ACT, presented an overview of the National Career Readiness Certificate (NCRC) assessments of WorkKeys. The NCRC is a portable, industry-recognized credential that is currently used by 13,000 employers nationwide. The NCRC contains three assessments: applied math, locating information, and reading for information. According to the ACT JobPro database, a student who scores a gold on the assessment is ready to be trained for 93 percent of all jobs. Caterpillar and Eastman are two current employers in Tennessee who support work-ready communities.

Dr. Towns, Casey Haugner Wrenn, and Debra Lyons answered questions posed by the task force to conclude the presentations.

## Student Panel

Brooklyn Stephenson, Juanita Gomez, Catherine English, and America Leon participated in the student panel moderated by Commissioner McQueen. All four students are currently enrolled in



postsecondary and graduated from Tennessee high schools in 2015. Common themes from the panel included a lack of preparation for postsecondary in terms of “soft (transferable) skills” such as study skills, lack of awareness of opportunities, and the importance of having an adult to guide and support. The students gave sound advice such as not worrying about the label given to something, concentrate on the outcome, focus on listening to student voice, including the communities in change, and provide readiness elements in high school. America Leon inspired the group with her passionate words about the hope that this room has in shaping students and community outcomes.

### **Group Share Out**

Task force members participated in small group discussions to answer the questions: (1) What do you consider as the strengths or most promising components of approaches, programs, learning models, accountabilities, and funding models that you have heard in the promotion of a “prepared,” “ready,” and/or “successful” student? (2) What are gaps or barriers that you believe exist or have heard exist that are (maybe) inhibiting students, educators, districts, and/or the state?

Groups discussed the importance of supporting students in owning their own career paths, providing strong information on the integration of pathways, supporting school counselors, mentoring programs, utilizing the power of accountability to drive positive growth, and WorkKeys.

### **Closing**

Commissioner McQueen ended the day by sharing the story of Cameron Middle School turning around from being the lowest-performing school in the state. She shared that the knowledge of how to use the data and owning it were integral to the school's success. Commissioner McQueen suggested that the task force should prioritize helping students own their own information and folding in the additional recommendations around this central element.

### **Next Meeting Information**

The task force will meet again Thursday, June 30 at the First Amendment Center to continue its discussion on postsecondary and career readiness. For additional information on the May meeting, please see the attached meeting notes document.

Thank you for your participation in the May meeting of the Career Forward Task Force. Please feel free to contact [Melissa.Canney@tn.gov](mailto:Melissa.Canney@tn.gov) with any questions you may have.

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HART RESEARCH ASSOCIATES PUBLIC OPINION STRATEGIES

# Rising to the Challenge: Are High School Graduates Prepared for College and Work?



Key findings from surveys among recent public high school graduates  
Conducted November 2014

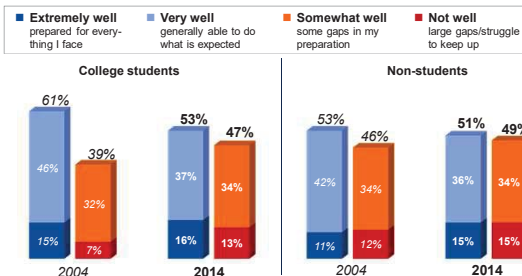
## Methodology

- A national online survey was conducted October 31 to November 17, 2014, among 1,347 recent public high school graduates from the classes of 2011 through 2014, including:
  - 741 students who are currently enrolled in two-year and four-year colleges (320 of whom have taken at least one remedial course)
  - 606 graduates who are not currently enrolled in two-year or four-year colleges, including 215 who attended college but quit before finishing
  - 277 African-American and 375 Hispanic recent public high school graduates

## Too many recent high school graduates report gaps in their preparedness for college and work after high school.

## About half report gaps in preparation for life after high school

How well did your high school education prepare you for college/the working world?



Group	Year	Extremely well prepared for everything I face	Very well generally able to do what is expected	Somewhat well some gaps in my preparation	Not well large gaps/struggle to keep up
College students	2004	15%	46%	32%	7%
	2014	16%	37%	34%	13%
Non-students	2004	11%	42%	34%	12%
	2014	15%	36%	34%	15%

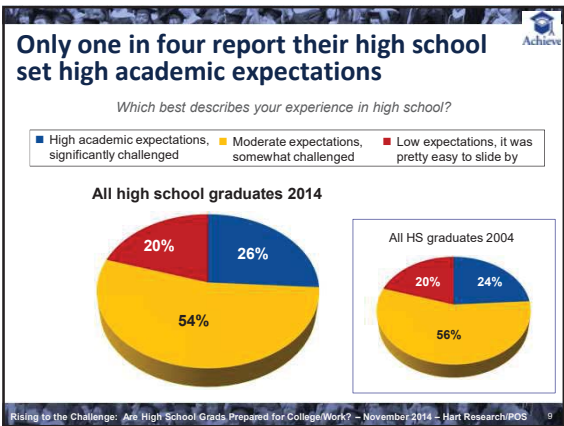
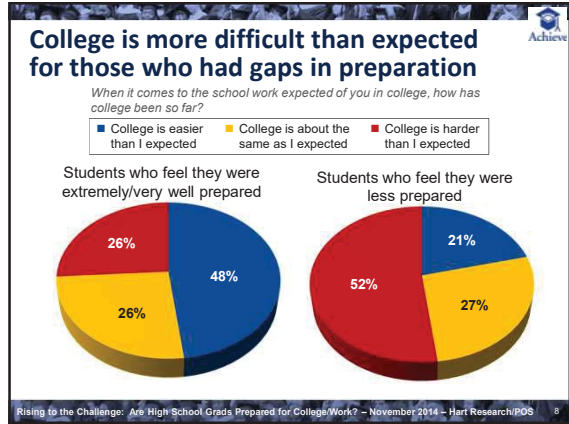
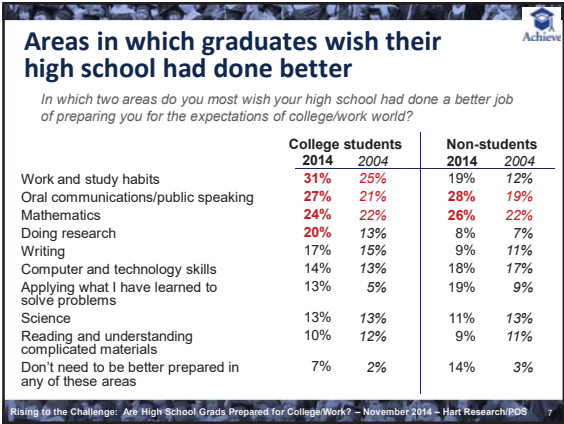
How well did high school prepare you for college/work?

- Large gaps** in one or more subject areas:
  - 49% of college students
  - 43% of non-students
- At least some gaps** in one or more areas:
  - 83% of college students
  - 81% of non-students

## Significant gaps across subject areas

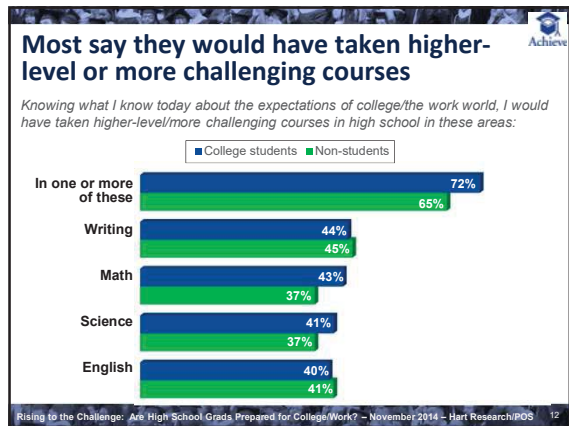
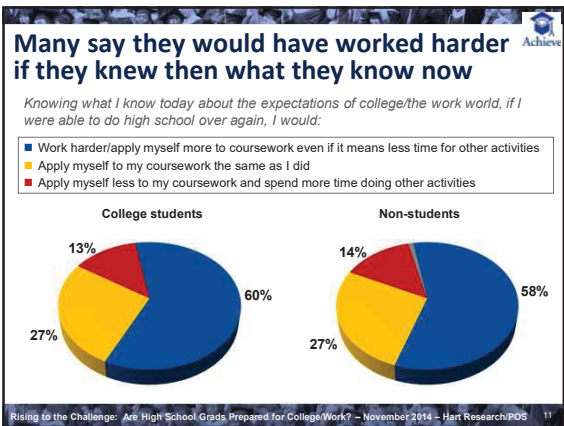
How well did high school prepare you for college/work in these areas?

Subject Area	College students		Non-students	
	At least some gaps	Large gaps/struggling	At least some gaps	Large gaps/struggling
Work and study habits	50%	22%	41%	13%
Oral communications/public speaking	46%	18%	47%	16%
Doing research	45%	17%	32%	9%
Science	41%	14%	49%	18%
Applying what I have learned to solve problems	36%	12%	41%	13%
Mathematics	36%	12%	41%	15%
Writing	36%	9%	34%	10%
Computer and technology skills	31%	10%	34%	10%
Reading and understanding complicated materials	30%	7%	27%	6%



## Knowing what I know now, I would have worked harder.

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### In their own words...

"If I could go back to high school, I would study hard and go to school every day. It wouldn't matter if I like the teacher or not, I just have to get through it to take that next step and go to college without taking pre-reqs, wasting money."

Female, New Orleans, 2-Year College Student

"I'm struggling. I made it harder on myself. My family told me 'do what you have to do to take that next step.' I didn't do that. I rebelled and I was failing classes. I didn't get the basic skills I should have had when I got to college and it was harder for me."

Female, New Orleans, 2-Year College Student

"I would put a little more effort into math class. I didn't put forth the extra effort and as a result I scored one point below what I needed for [University of New Orleans]. So, I had to go to Delgado instead and couldn't go into my major because I was set back and had to take a math remedial class to do what I want to."

Male, New Orleans, 2-Year College Student

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## Potential Solutions Exist.

Rising to the Challenge: Are High School Grads Prepared for College/Work? – November 2014 – Hart Research/POS 14

### Most say they would have worked harder if expectations had been higher

If my high school had demanded more, set higher academic standards, and raised expectations of the course work and studying necessary to earn a diploma:

All high school graduates

I am CERTAIN I would have worked harder:	
Men	43%
Women	48%
Whites	42%
African Americans	53%
Hispanics	50%
All college students	48%
In two-year college	49%
In four-year college	47%
Took remedial classes	54%
No college	39%
Some college/dropped out	45%
Extremely/very prepared	51%
Less prepared	39%

Rising to the Challenge: Are High School Grads Prepared for College/Work? – November 2014 – Hart Research/POS 15

### Those who experienced higher expectations feel better prepared

The education I received in high school prepared me extremely or very well for college/the working world:

College students whose high school had:

- High academic expectations: 74%
- Moderate academic expectations: 50%
- Low academic expectations: 36%

Non-students whose high school had:

- High academic expectations: 72%
- Moderate academic expectations: 53%
- Low academic expectations: 45%

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### Grads of schools that excel at encouraging students to take the most advanced courses feel better prepared

The education I received in high school prepared me extremely or very well for college/the working world:

College students who say their high school did:

- A very good or good job encouraging students to take most advanced courses: 61%
- A fair or poor job encouraging students to take most advanced courses: 37%

Non-students who say their high school did:

- A very good or good job encouraging students to take most advanced courses: 59%
- A fair or poor job encouraging students to take most advanced courses: 39%

Rising to the Challenge: Are High School Grads Prepared for College/Work? – November 2014 – Hart Research/POS 17

### Grads who took math beyond Algebra II feel better prepared

The math I took in high school prepared me extremely or very well for college/the working world:

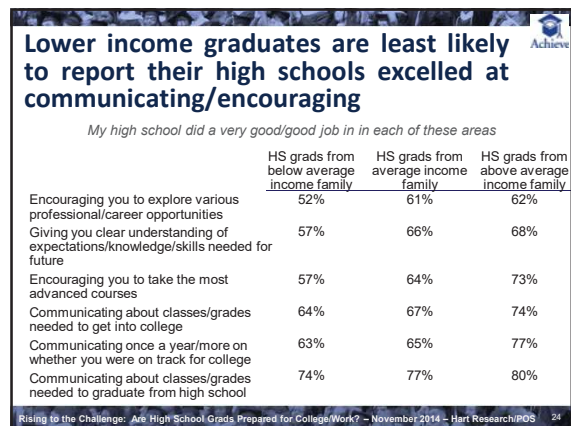
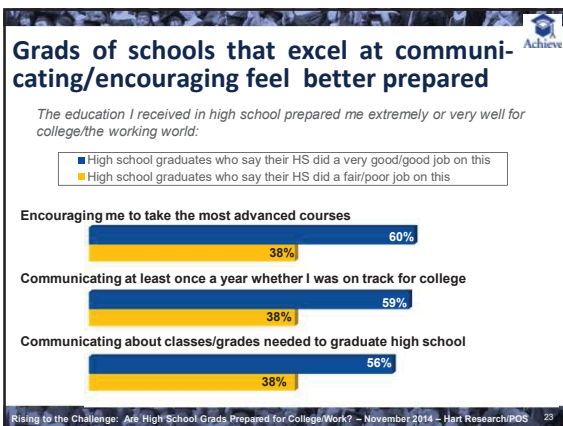
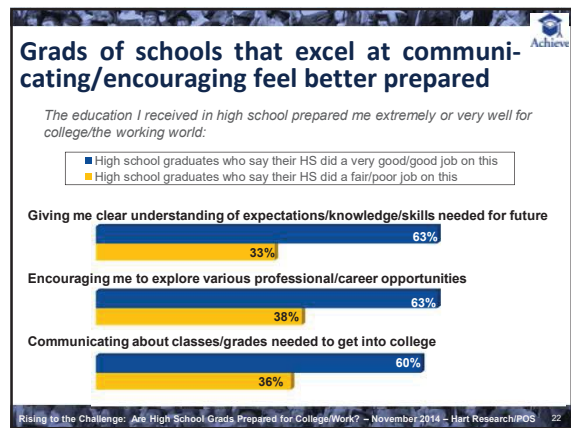
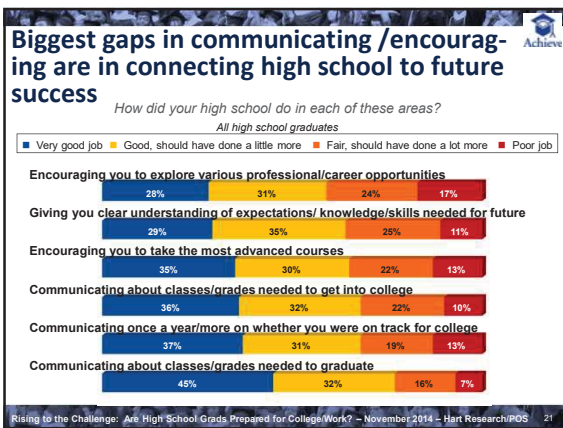
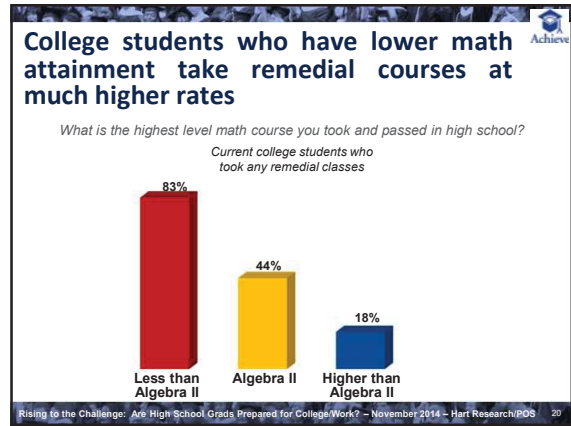
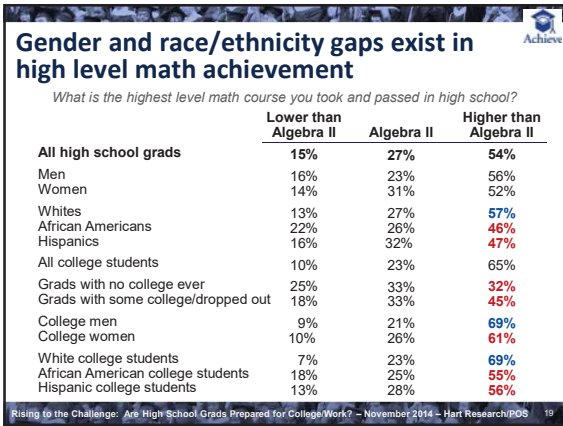
College students who took:

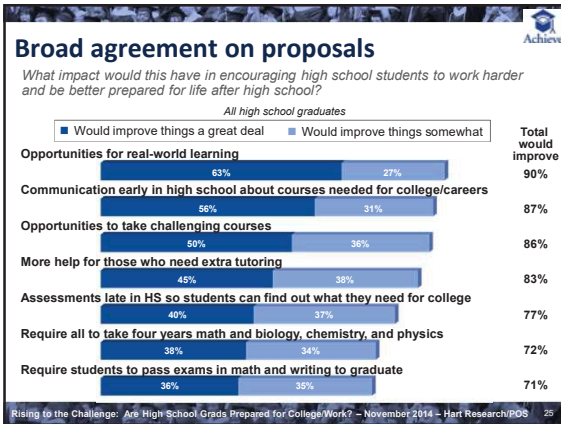
- Higher than Algebra II math classes: 71%
- Algebra II or lower math classes: 48%

Non-students who took:

- Higher than Algebra II math classes: 71%
- Algebra II or lower math classes: 52%

Rising to the Challenge: Are High School Grads Prepared for College/Work? – November 2014 – Hart Research/POS 18





- ### The bottom line: Findings
- Nearly half of recent high school graduates report they were not fully prepared for their next steps
  - They see clear gaps in their preparation, and this has real consequences:
    - Only one quarter feel their high school set high expectations
    - Over one quarter wish their high school had done a better job in key areas: study habits, communications, and math
    - Four in ten current students find college more difficult than expected
  - Recent grads tell us they would have worked harder if they had fully understood the challenges that lay ahead
  - Both college students AND non-college students report not having as much academic preparation as they needed
  - Recent Grads—whether they are in college or working—feel better prepared if they took more advanced courses in high school
- Rising to the Challenge: Are High School Grads Prepared for College/Work? – November 2014 – Hart Research/PDS 26

- ### The bottom line: Solutions
- The research suggests that providing real academic challenge for high school students and communicating with them about what is needed for future success helps to better prepare grads for the road ahead
  - Providing consistent and regular signals to ALL high school students about what academics are needed to be ready for college and careers is key:
    - Set rigorous expectations, students will rise to the challenge
    - Have graduation requirements that ensure academic preparation for all
    - Encourage all students to take the most advanced classes
    - Ensure the rigor of classes offered; reliance on course titles can lead to watered down courses
    - Communicate with students early in high school (if not before) about the expectations and skills (including courses) needed for future success—including college admissions and career interests
    - Regularly tell students whether they are “on track”
    - Tie learning in high school to life outside the classroom by providing real-world learning opportunities
    - Provide support/help for students who need it (e.g. tutoring)
    - All means ALL. Be sure all students understand and know the benefit of academic preparation for college and careers; everyone needs to be prepared for their next steps.
- Rising to the Challenge: Are High School Grads Prepared for College/Work? – November 2014 – Hart Research/PDS 27



*Linking Research and Resources for Better High Schools*

# **Preparing High School Students for Successful Transitions to Postsecondary Education and Employment**



This issue brief is offered by the National High School Center, a central source of information and expertise on high school improvement issues that does not endorse any interventions or conduct field studies. Funded by the U.S. Department of Education, the National High School Center serves the Regional Comprehensive Centers in their work to build the capacity of states across the nation to effectively implement the goals of No Child Left Behind relating to high schools. The National High School Center is housed at the American Institutes for Research and partners with other leading education research organizations such as Learning Point Associates, National Center for Educational Achievement (NCEA), WestEd, and MDRC, the organization responsible for the primary authorship of this report. *The contents of this report were developed under a grant from the U.S. Department of Education. However, those contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government.*

# Preparing High School Students for Successful Transitions to Postsecondary Education and Employment

## ISSUE BRIEF AUTHOR

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Michael Bangser  
MDRC

August 2008

## At-a-Glance

### KEY ISSUE

Students' high school experiences often do not prepare them adequately for postsecondary education and the world of work. Special attention should be paid to increasing the rigor, relevance, and engagement of the high school curriculum, including for students who have traditionally faced barriers to successful postsecondary transitions.

### Primary Finding

A number of promising approaches are available to improve transitions from high school. However, effective implementation of these approaches will require sustained financial support along with appropriate investments in technical assistance and professional development.

### TAKE-AWAYS

#### State Level

- Align high school curricula, graduation standards, and assessments with the expectations of postsecondary educational institutions and employers.
- Hold high schools accountable for increasing the percentage of graduates who complete a curriculum that prepares them for postsecondary education and

## Preparing High School Students for Successful Transitions to Postsecondary Education and Employment

by Michael Bangser of MDRC

### INTRODUCTION

In the current information- and technology-based economy, a high school diploma is no longer sufficient as a terminal degree. Most of the fastest-growing jobs that pay reasonably well require at least some postsecondary education<sup>1</sup> (Carnevale & Desrochers, 2003). However, due to what is often characterized as a leaky educational pipeline, too many students fail to complete high school and make a successful transition to postsecondary education and careers.

Nationally, almost 30% of students do not graduate from high school with a regular diploma (Swanson, 2004). Many of the students who do graduate decide to combine work with various forms of postsecondary education during a period when their career plans are still evolving (Haimson & Deke, 2003; McDonough, 2004). Whatever specific paths young people pursue, it is increasingly clear that the skills needed for work often mirror those required for admission to and success in postsecondary education (ACT, 2006; Carnevale & Desrochers, 2003).

This Issue Brief reviews lessons from studies of selected policies and programs designed to improve students' preparation for postsecondary pathways. Special emphasis is placed on ways to help those who traditionally face substantial barriers to success, including low-income students, African American and Latino students, and students with disabilities.

### THE CHALLENGE

Students' high school experiences too often fail to prepare them for postsecondary education or for the rigors of work in an information-based economy.

Surveys consistently show that many high school graduates do not meet employers' standards in a variety of academic areas, as well as in employability skills such as attendance, teamwork and collaboration, and work habits. (National Association of Manufacturers, 2005; Peter D. Hart Research Associates, 2005). In addition, many students enter postsecondary education needing remedial coursework. Even when they receive remediation, these students are less likely to earn a degree or certificate than students who do not need remediation (Wirt et al., 2004).

### State Level

today's information-based workforce demands.

- Create governance mechanisms and financial incentives to align K–12 and postsecondary planning and budgets.
- Provide feedback to high schools by creating a system for tracking students across the K–12 and postsecondary education systems and into the workplace.
- Develop financial aid policies that provide incentives not only to attend but also to complete postsecondary education.

### District and School Levels

- Intervene early, when students are developing their college and career aspirations.
- Emphasize rigor and high expectations for all students, along with appropriate counseling and other supports.
- Integrate strong academic content into career-focused classes.
- Collaborate with postsecondary institutions, economic development agencies, and employers to help create smoother transitions to college and the workforce.

Transitions from high school to postsecondary education and employment can be particularly challenging for students with disabilities. Although there has been an increase in postsecondary attendance (especially at community colleges) by students with disabilities, their enrollment rate is still well below that of their peers in the general population. The employment rate of students with disabilities soon after leaving high school also remains well below that of their same-age peers (Wagner et al., 2006). Moreover, students with disabilities are faced with fragmented services, limited program accessibility, and training that too often focuses on low-paying jobs (National Council on Disability, 2007). (Strategies to promote successful postsecondary transitions for students with disabilities are presented throughout this Issue Brief but particularly in the section beginning on page 14.)

### IMPLEMENTATION LESSONS AND CHOICES

Varied strategies have been implemented to prepare high school students for postsecondary education and employment. Table 1 includes examples of some specific programs; however, this Issue Brief focuses on cross-cutting lessons that decisionmakers should consider in tailoring programs and policies to their specific state and local circumstances.<sup>2</sup> This information can be supplemented by referring to more detailed discussions in the Additional Resources listed at the end of this publication.

#### Preliminary Program Design Issues

Those responsible for designing policies and programs to prepare students for successful postsecondary transitions should first address three overarching questions:

**1. When should the intervention start?** Interventions that begin in the junior or senior year can be too late—certainly for those students who have already dropped out but also for those who have aspirations for postsecondary education but have not passed the required courses. By beginning earlier, it is possible to engage students when they should be developing initial postsecondary education and career aspirations accompanied by an appropriate academic plan (McDonough, 2004).

Students need to pass core ninth-grade courses in English, math, science, and social studies if they are to remain on track for high school graduation (Allensworth & Easton, 2005; Schneider, 2006). If students do not pass key “gatekeeper courses” such as Algebra I on time, it can be difficult to complete the full sequence of coursework needed for postsecondary education, particularly in 4-year colleges (Paul, 2005; Schneider, 2006). Students must understand the importance of taking and passing the early courses, and schools must provide sufficient access to these courses along with the necessary supports to help students pass them.<sup>3</sup>



**TABLE 1**

**Characteristics of Selected Interventions To Promote Successful Transition to Postsecondary Education and Employment**

**Dual-Credit Programs**

**Examples:**

*Dual enrollment*

- Courses are taken in high school that are equivalent to those taken at a postsecondary institution.
- Credit is awarded on both the high school transcript and the transcript of the sponsoring postsecondary institution.

*Early college high schools*

- Students earn up to an associate's degree or 2 years of credit toward a baccalaureate degree while in high school.
- The middle grades are included, or there is outreach to middle-grade students, to promote academic preparation and awareness of the Early College High School option.

*Middle college high schools*

- Secondary schools, usually grades 10–12, are located on or adjacent to college campuses.
- Students can take high school and college courses; they receive a high school diploma and can earn college credits.

**Tech Prep**

- Combines a minimum of 2 years of secondary education with a minimum of 2 years of postsecondary education in a nonduplicative, sequential course of study.
- Integrates academic, vocational, and technical instruction, and uses work-based and worksite learning where appropriate.
- Leads to an associate or baccalaureate degree in a specific career field.

**Career and Technical Education (Under the Carl D. Perkins Career and Technical Education Act of 2006—Perkins IV)**

- The new Act provides an increased focus on the academic achievement for career and technical education students, strengthens the connections between secondary and postsecondary education, and improves state and local accountability.

**Career Academies**

- “School-within-a-school” structure normally serves 30–60 students per grade from grades 9 or 10 through grade 12.

- Academic and occupational curricula are combined around a career theme, such as health or business and finance.
- Employer partnerships provide career awareness activities and work internships related to the career theme.

### Federally Funded College Preparatory Programs

#### Examples:

- TRIO programs—educational opportunity outreach programs, including Upward Bound and Talent Search, designed to motivate, support, and prepare students from disadvantaged backgrounds for college.
- GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs)—a discretionary grant program of the U.S. Department of Education that provides states with funding to create local partnerships serving cohorts of students beginning no later than grade 7 and extending through high school.

### Other College Preparatory Programs

#### Examples:

- AVID (Advancement Via Individual Determination)—a grade 4 through 12 system to prepare students in the academic middle for 4-year college eligibility through the use of advanced in-school courses, an AVID-specific curriculum and elective, and tutors.
- Project GRAD (Graduation Really Achieves Dreams)—an integrated approach that includes scholarships for students meeting achievement and participation goals, summer institutes on college campuses, parental and community involvement, social services and academic enrichment programs at the school site, and interventions at “feeder schools” of participating high schools.
- Career Beginnings—promotes college enrollment and better job skills through collaborations among colleges, public schools, and businesses. The program utilizes summer jobs, workshops, classes, and counseling to assist juniors and seniors who have average academic performance with their career plans and applications to college.

### Scholarship and Financial Aid Programs

A range of programs that combine some or all of the following elements:

- Public and/or private funding<sup>4</sup>
- Broad-based eligibility or a focus on economically disadvantaged students
- Academic or other requirements such as a threshold grade point average (GPA), graduation from a high school in the state, or attendance at a postsecondary institution in the state.
- Commitment of college scholarship funds early (such as in the middle grades) or later in high school.
- Stand-alone financial aid or accompanying academic, mentoring, and other supports.
- Tuition tax credits as well as scholarship assistance.

*2. Broad-based or targeted approaches?* In allocating limited resources, policymakers and administrators must decide, for example: (a) the proper balance between whole school reforms that reach all or most students, and more targeted efforts for specific categories of students; and (b) whether to prepare students for particular career or educational paths, or to provide them with maximum flexibility to take advantage of a range of options.

In making these choices, policymakers and administrators should consider the following:

- Sometimes, a special intervention improves postsecondary outcomes for at-risk students, but not for higher performing students who would have done just as well without it. This was true for employment outcomes in a study of Career Academies (Kemple, 2004) and for 4-year college attendance in a study of Upward Bound (Myers et al., 2004), both of which are discussed further in the companion Research Brief. It may, however, be helpful for these programs to serve students with a range of abilities; otherwise, teachers and students might have lower expectations of the programs, seeing them as weaker, remedial efforts (Moore & Myers, 2004; Oakes & Saunders, 2007).
- Concerted outreach may be needed to overcome preconceptions (by staff and students alike) about the nature of certain courses and the types of students they serve. For example, operators of dual-credit programs, which give students high school and college credit simultaneously and which have traditionally enrolled mostly higher performing students, could use outreach methods such as mailings, school fairs, and counselor referrals to attract a broader range of participants (National High School Center, 2007).
- Many students with disabilities are unaware of their full potential. It is important to expose these students early to resources and information that help them develop the decisionmaking and self-advocacy skills that they will need during the transition process and after high school (National Council on Disability, 2007).
- Blending career-oriented and academic courses could help students avoid premature career decisions, while enabling them to see the practical application of academic subject matter (Oakes & Saunders, 2007). Grounding the curriculum in a specific career can lend helpful focus and context to the instruction but should not be cast as a permanent choice, because students often change their plans (Haimson & Deke, 2003).

*3. How comprehensive?* Stand-alone interventions, such as tutoring, may be insufficient for students with multidimensional needs. For these students, a comprehensive combination of rigorous coursework along with counseling, ongoing assessment, financial aid, and other supports may be necessary, especially to keep struggling students and students with disabilities on track for high school graduation and postsecondary success (Lerner & Brand, 2006; National Council on Disability, 2007; The Education Trust, 2005).

#### **Curricula and Instruction**

High school curricula need to be rigorous, relevant, and engaging to prepare students for successful postsecondary activities.

*High expectations and rigor.* Students—including those with previously low achievement levels—who take more rigorous, academically intense programs in high school enroll and persist in postsecondary education at higher rates than similar students who pursue less challenging courses of study (Adelman, 2006; Oakes & Saunders, 2007). In addition, many students who enter the workforce immediately upon high school graduation now need the same level of skills and knowledge as students entering college (Kline & Williams, 2007). Therefore, it is important to create a culture of high standards with consistent, schoolwide messages about the standards needed for postsecondary success (Schneider, 2006; The Education Trust, 2005).

A number of factors, notably high expectations and efficient use of class time (The Education Trust, 2005), can contribute to a course's level of rigor. In the case of dual-credit and other programs that link high schools with local colleges, the level of rigor might be influenced by the course's location (whether at the college or the high school), the type of instructor (a college or a high school teacher), prerequisites, course length, and mix of high school and college students in the class. It is important to distinguish in these programs between courses that are "college like" and courses that are truly "college level" (Lerner & Brand, 2006; National High School Center, 2007).

Expanded access to Advanced Placement (AP) courses is another means of increasing rigor. Six states (Alabama, Georgia, Kentucky, Maine, Nevada, and Wisconsin) have received grants to expand disadvantaged students' participation in AP courses, and the Texas Advanced Placement Incentive Program has reportedly led to teachers viewing more students as ready for AP coursework (see [www.collegeboard.com](http://www.collegeboard.com); [www.nga.org](http://www.nga.org)).

**Alignment.** Concern that students' high school experiences are disconnected from the expectations of postsecondary educational institutions and employers has prompted calls to transform the kindergarten through grade 12 (K–12) system into a more integrated kindergarten through college (K–16) or preschool through college (P–16) system. This change would engage governors, education officials at both the K–12 and college levels, business executives, and others working together to improve the alignment of high school curricula with the expectations of postsecondary education and work. One response is the American Diploma Project, in which states have committed to an ambitious agenda with four goals:

- Aligning high school standards with postsecondary and workplace expectations.
- Upgrading high school course requirements so that students take a college- and work-ready curriculum.
- Streamlining assessment systems so the tests that high school students take serve as readiness tests for college and the workforce.
- Holding both high schools and postsecondary institutions accountable for student success.

Achieve, Inc. (2007*b*) reports a number of specific examples of state developments in these areas:

- Thirteen states have end-of-course testing in place to ensure rigor.
- Rhode Island and Delaware plan to review all district high school curricula to confirm that they are aligned with state standards (an approach that might be more feasible in small states).
- Seven states (Delaware, Georgia, Indiana, New York, North Carolina, Oklahoma, and Texas) hold high schools accountable for increasing the percentage of graduates who complete college- and work-ready curricula.

Indiana, Texas, and Louisiana are among the states that make a college preparatory curriculum the default requirement for all high school students. For example, effective in the fall of 2007, Indiana's Core 40 curriculum includes a balanced sequence of rigorous courses in the core subjects of English/language arts, mathematics, science, and social studies, as well as physical education/health and wellness and electives. To graduate with fewer than the Core 40 courses, a student must complete a formal opt-out process with parental consent ([www.indianacore40scholars.org](http://www.indianacore40scholars.org)).

Washington State's Transition Mathematics Project (TMP) is a statewide public–private partnership that provides information and support to prepare students for successful transitions to postsecondary education in mathematics. For example, TMP works to align 11th- and 12th-grade curricula with introductory college curricula and placement tests, to build teachers' capacity to carry out this program, and to communicate high mathematics expectations to students (see [www.hecb.wa.gov](http://www.hecb.wa.gov)).

*Teachers' professional development.* Teachers in schools that serve disadvantaged populations are often less experienced and less knowledgeable about the subjects they teach than are teachers in more affluent communities (Jerald, 2002). Some steps to consider in response to these concerns include:

- Providing teachers with well-designed, established curricula rather than expecting them to create their own.
- Providing training in advance through undergraduate, graduate, or continuing education courses as well as ongoing coaching of teachers.
- Encouraging teachers to work together to align curricula with standards, create lesson plans, and discuss ways to make classroom activities more engaging.
- Enlisting department-wide support.
- Providing pre-service and in-service training that prepares teachers for the real-life resource constraints and student learning needs in schools that enroll high numbers of low-performing students (Herlihy & Quint, 2006; McDonough, 2004).

*Integration of academic and technical content.* Recognition that career and technical education (CTE) should include challenging academics is reflected in the Carl D. Perkins Career and Technical Education Act of 2006 and in efforts by a growing number of states (NGA Center for Best Practices, 2007). Yet CTE teachers often feel that they have received insufficient training on how to integrate academic and technical content (Silverberg et al., 2004).

Useful ideas can be drawn from an effort in which mathematics teachers were paired with and supported CTE teachers but did not team teach or teach the mathematics themselves. The project evaluators concluded, among other things, that CTE programs should:

- Develop a “community of practice” among a critical mass of teachers, with the mathematics teachers committing to provide regular support to CTE teachers before and after classes.
- Identify opportunities for CTE teachers to teach mathematics concepts as they naturally occur within the CTE curriculum.
- Provide mathematics and CTE teachers sufficient time to engage fully with each other and to develop a collegial relationship.
- Consistently emphasize to students that mathematics is an essential workplace skill (Stone et al., 2006).

The integration of career-focused and academic content is not necessarily limited to students specifically in CTE classes. Proponents of the Multiple Pathways approach, for example, believe that all students would benefit from a rigorous combination of academic and career-focused learning, along with preparation for civic participation (Oakes & Saunders, 2007).

#### **Counseling, Assessment, and Other Supports**

High schools can provide a range of supports to complement students' academic preparation for college and the workforce.

*Early and ongoing counseling for students and their families.* Counselors can be particularly influential with students from disadvantaged backgrounds; important elements include the provision of information on college costs, financing options, and courses required for college admission (McDonough, 2004). A college-going culture should be instilled for incoming ninth-grade students (The Education Trust, 2005) and is enhanced if counselors have reasonable caseloads,

are held accountable for college enrollment, and receive specific training in college counseling (McDonough, 2004). Counselors who work with students with disabilities should be trained to help identify postsecondary institutions that offer appropriate support services and to develop the documentation that will be needed for students to receive necessary accommodations. In schools with limited resources and high counselor caseloads, mentoring programs or drop-in offices staffed by college students or other community volunteers can be helpful (Schneider, 2006).

**Assessment.** Counseling should be supported by assessment data as part of a concerted “early warning system,” beginning in ninth grade, that identifies struggling students and ensures that they get the additional help they need (The Education Trust, 2005). The early and regular assessments should be tied to measures of college and workplace readiness. For example, mathematics testing programs in Kentucky, North Carolina, and Ohio offer students, beginning in their sophomore year, feedback on whether students are on track to succeed in college-level mathematics.

Although, according to Achieve, Inc. (2007a), states have made limited progress in aligning high school assessments with the demands of postsecondary education and the workplace, notable examples include:

- California’s Early Assessment Program (a collaboration among the State Board of Education, California Department of Education, and the California State University system) and the Texas Assessment of Knowledge & Skills (which is aligned with statewide curricula) are assessment tests taken by students in the 11th grade that are used for freshman placement in higher education.
- Colorado, Idaho, Illinois, Kentucky, Maine, and Michigan have incorporated SAT and/or ACT college admissions tests into their state assessment systems for all students, not just the college-bound students.
- New York’s end-of-course Regents Exams are used both for high school accountability and for college placement.

The approaches used in these states reduce confusion about what is required for students to be ready for college-level work and also reduce the number of tests that students need to take. Achieve, Inc. (2007a) does, however, recommend that assessments that incorporate college placement exams should also include additional questions or performance measures to ensure alignment with the full range of advanced concepts and skills needed for successful postsecondary transitions. For example, Maine and Michigan include items supplementing the regular questions on the SAT and ACT, respectively. Maine has worked with the College Board to develop supplemental items in statistics and data, which are part of the state’s standards but not extensively assessed on the SAT (Achieve, Inc., 2007b).

**Career awareness and workplace readiness.** Exposure to the world of work can be important because high school students often lack information on the educational requirements for particular jobs (Schneider, 2006). Relevant activities include, for example, paid and unpaid internships, guest lecturers from the business community, career days, youth apprenticeships, and job shadowing. Students report that one-on-one contacts with employers onsite are more helpful than group worksite tours or school-based activities (Haimson & Deke, 2003).

The increased post-high school earnings for young men participating in Career Academies appeared to be linked to career awareness sessions and internships that provided participants with helpful work experience and job references. This work experience should be structured to complement, not substitute for, students’ academics (Kemple, 2004).

**Other supports and incentives.** Additional steps to help keep students engaged and learning include:

- A positive relationship with a caring adult mentor, which can be provided individually or in groups; by teachers, other school staff, college students, or members of the community; and either in the school or outside the school (Lerner & Brand, 2006).

- “Advisories,” used as an alternative to regular homeroom periods, that include small, supportive groups led by school staff who develop a personal relationship with students (Herlihy & Quint, 2006).
- Small learning communities, in which students sharing the same cadre of core-subject teachers in a personalized environment come to feel that their teachers know and care about them (Herlihy & Quint, 2006).
- Notification in middle school or early high school that financial aid for postsecondary education will be available if students meet certain conditions, as in Indiana’s Twenty-First Century Scholars Program and Oklahoma’s Higher Learning Access Program, both of which are targeted to low-income students. State-funded early-commitment scholarship programs can be complemented with academic and other supports, partnerships with businesses and foundations, and later “hands on” help with college and financial aid applications, as well as visits to college campuses to shadow students at host institutions (Blanco, 2005; Constantine et al., 2006).
- Early practice and counseling on the content of college placement exams supplemented with SAT/ACT preparation classes and payment of students’ test fees. For example, the Northwest Education Loan Association has conducted SAT preparation classes for low-income students in the Seattle area ([www.nela.net](http://www.nela.net)). ACT’s PLAN program helps students measure their current academic development, explore career and training options, and make plans for their remaining high school and postsecondary years. The “pre-ACT” test is typically administered in the fall of the sophomore year and provides an estimate of the student’s predicted scores on the actual ACT test ([www.act.org/plan](http://www.act.org/plan)).
- Early forums for students with disabilities and their parents to increase their knowledge of the resources and accommodations that are important for a successful transition to postsecondary education and employment (National Council on Disability, 2007).

#### **Collaboration and Joint Accountability**

States, school districts, and individual high schools can all play key roles in promoting collaborations that facilitate successful transitions to postsecondary education and employment. For example:

*Collaborations with postsecondary institutions.* As noted earlier, joint planning between high schools and colleges helps ensure that high school curricula and assessments are aligned with postsecondary requirements. Also, the National Association of System Heads and the Education Trust have put together a network of state university systems and K–12 leaders to foster K–16 systems in their states ([www2.edtrust.org](http://www2.edtrust.org)).

High schools and community colleges often cooperate in various forms of dual-credit programs. High schools and their students benefit when community colleges offer laboratory and other courses not available at the high school, while participating community colleges benefit from a pipeline of current and future students (Bailey & Karp, 2003; Lerner & Brand, 2006). Efficient dual-credit systems may improve postsecondary outcomes by shortening the time it takes for students to earn a degree, thereby reducing the cost of postsecondary education (Bailey et al., 2002). Although dual-credit programs hold strong promise, additional research is needed to confirm their impact on postsecondary outcomes (Lerner & Brand, 2006).

*Collaboration with employers and economic development agencies.* Youth apprenticeships, internships, and job shadowing can be helpful components of an overall program. The experience of Career Academies suggests the benefits of carefully structured partnerships between high schools and employers, as well as having the school designate a full-time staff member to serve as a liaison to employers (Kemple, 2004).

CTE and other programs should establish effective working relationships with private industry, economic development agencies, and workforce investment boards. These efforts can be strengthened by carefully identifying growth

industries, as has been done in Maryland, where state agencies have joined with employers to design and validate high-growth industry clusters (NGA Center for Best Practices, 2007). IBM's Entry Point program places students with disabilities into summer internships and camps that focus on providing training to students beginning in middle school. These experiences often lead to regular employment. In Jacksonville, Florida, the High School/High Tech Program exposes students with disabilities to careers in high tech industries through field trips and mentoring opportunities (National Council on Disability, 2007).

**Data and accountability.** Documentation of, and accountability for, transitions from high school are complicated by the difficulty of tracking students across disconnected education systems and into the workplace. The fact that records in the K–12 and postsecondary systems are often not linked impedes creation of a high-quality data system spanning the K–16 continuum.

The Data Quality Campaign is a concerted effort to address the challenges of constructing longitudinal data systems to help track student progress and determine the value-added of specific schools and programs. The Campaign suggests 10 essential elements for an effective longitudinal data system, including, for example:

- Unique student identifiers to connect student demographic, enrollment, program participation, transcript, test score, and graduation data across key databases across years.
- A teacher identifier system with the ability to match teachers to students.
- A state data audit system assessing data quality, validity, and reliability.

The Data Quality Campaign's Web site ([www.dataqualitycampaign.org](http://www.dataqualitycampaign.org)) provides detailed information on individual states' efforts in these areas. Although important challenges remain, such as defining core data elements, addressing issues under the Families Educational Rights and Privacy Act (FERPA), and linking systems, a number of states have made great strides. For example, Florida has the capacity to track students' progress through the state's education system and into the workforce (Achieve, Inc. 2007*b*; Callan et al., 2006). Arkansas, Louisiana, Massachusetts, and Texas report that they can track students from kindergarten through college graduation (Achieve, Inc., 2007*b*). Kentucky reports on high school graduates' college preparation and participation, including comparative information at the school, district, and state levels on ACT and AP test taking and success ([www.dataqualitycampaign.org](http://www.dataqualitycampaign.org)).

### Finances

Decisions on financing of interventions to promote successful transitions should consider the following factors:

**Relative costs.** Some choices described in this Issue Brief could require additional expenditures—for instance, for supplementary supports, smaller counselor caseloads, and accelerated credit options such as AP and dual-credit programs—but the benefits may be worth the additional upfront cost (see State of Florida, Office of Program Policy Analysis and Government Accountability, 2006).

**Financial incentives to foster a K–16 system.** States can combine K–12 and postsecondary per-pupil reimbursements into a K–16 innovation fund, as in North Carolina's Innovative Education Initiatives Act (National Governors Association, 2003). Broader financial incentives for an integrated K–16 system might require holding high schools and colleges jointly accountable for outcomes, as well as merging what are now typically separate K–12 and higher education executive and legislative structures that oversee budget decisions (Venezia et al., 2005).

**Multiple interests.** Stakeholders at the federal, state, and local levels, as well as college and school administrators and parents, all have particular perspectives—and occasionally competing interests that need to be balanced. For example,



it can be complicated in dual-credit programs to determine how to reimburse participating high schools and colleges fairly while not paying twice for the same students or placing financial burdens on students (Lerner & Brand, 2006). In North Carolina and Michigan, high schools and colleges share the cost of dually enrolled students (National High School Center, 2007).

*Covering a range of costs.* Low-income students may not be able to bear even minimal costs for program participation. Financial assistance might, therefore, need to cover such items as laboratory fees, test fees, textbooks, and transportation (Lerner & Brand, 2006).

*Structuring scholarship assistance.* The factors listed under Scholarship Incentive Programs in Table 1 will all have implications for the number of students who can be supported with available funding. Public funding should create incentives for both the student and the college to emphasize *completion* of the degree, not only initial enrollment. For example, limiting financial aid to only a portion of students' college tenure could be shortsighted.

*Investments in quality implementation.* Intensive program development and continuous improvement efforts are often needed to ensure program quality. Despite the inevitable budgetary pressures, it can be worthwhile to enlist outside expertise for technical assistance and professional development as one way to promote effective program implementation (e.g., Grubb & Stern, 2007; Quint, 2004). Watered-down versions of promising interventions might not produce the expected results.

## SUCCESSFUL TRANSITIONS FOR STUDENTS WITH DISABILITIES

As is the case with other students, those with disabilities are a diverse population with multidimensional needs. Many of the lessons described earlier in this Issue Brief will benefit all students, while the section below places particular emphasis on meeting the needs of students with disabilities.

IDEA 2004 [section 614(d)(1)(A)(i)(VIII)] requires that students age 16 or older have Individualized Education Programs (IEPs) that include appropriate measurable postsecondary goals, based on age-appropriate transition assessments. States are required to report on the “[p]ercent of youth aged 16 and above with an [IEP] that includes coordinated, measurable, annual IEP goals and transition services that will reasonably enable the student to meet postsecondary goals [(20 U.S.C. 1416(a)(3)(B)).” Transition requirements under IDEA 2004 include, in summary [section 614(d)(1)(A)(i)(VIII)]:

- An assessment process that focuses on identifying one or more postsecondary goals for students.
- Specification of one or more postsecondary goals in the areas of education/training, employment, and/or independent living, as appropriate.
- Specification of one or more annual IEP goals that are directed to assist students to meet their postsecondary goals.
- Specification of transition services in the IEP (including instruction, community experiences, and other activities as appropriate) that are designed to facilitate the transition from school to anticipated postschool environment(s) and the achievement of postsecondary goals.

In addition, Indicator 14 requires states to report on the percentage of students with IEPs who, within 1 year of leaving high school, have been competitively employed, or attended some type of postsecondary education, or both. A complete listing of transition requirements is available at <http://idea.ed.gov/download/statute.html> and [idea.ed.gov/explore/view/p/%2Croot%2Cdynamic%2CTopicalBrief%2C17%2C](http://idea.ed.gov/explore/view/p/%2Croot%2Cdynamic%2CTopicalBrief%2C17%2C). The National Secondary Transition

Technical Assistance Center has developed a checklist and is preparing training materials for states to use in carrying out their responsibilities ([www.nsttac.org/content/i13/i13aprchecklist.pdf](http://www.nsttac.org/content/i13/i13aprchecklist.pdf)). In addition, a comprehensive report by the National Council on Disability reviews the issues and existing knowledge related to the employment of people with disabilities. The report presents new information on the perspectives of employers, people with disabilities, and the disability specialist on the key factors that either limit or facilitate employment (National Council on Disability, 2007).

Transition planning for students with disabilities should particularly reflect the following considerations:

***A different postsecondary environment.*** Although nondiscrimination statutes, such as the Americans with Disabilities Act and Section 504 of the Rehabilitation Act, apply to postsecondary educational institutions and employers, the comprehensive and individualized provisions of IDEA—including the requirement of an IEP—do not. In colleges, for example, students will find higher expectations for independence and fewer opportunities for direct contact with faculty (Eckes & Ochoa, 2005).

In addition to ensuring that students and their families are fully informed of these differences, a balance must be struck between supporting students' current needs and preparing them for the more demanding environments that they will enter. Students' high school experiences should gradually be adjusted to fit what they will encounter in postsecondary activities (Jones, 2002; Stodden & Conway, 2002). To the extent possible, the transition planning process should reflect an assessment of the specific postsecondary education or workplace environments that the students will encounter.

***Early and active participation by students in transition planning.*** The transition process should begin early in high school and embody student-focused planning that enables them to participate actively in the process. Decisions should be based on the students' goals and interests. This process requires that students be provided with opportunities to become aware of options, to reflect on them in setting short- and long-term goals, and to assess the progress that is being made toward achieving their goals (Kohler & Field, 2003). During the transition process, students should work with a variety of individuals, including psychologists, general and special educators, administrators, counselors, and parents—and also reflect on their progress during the past year (Kohler & Field, 2003).

The transition services that students will receive must be documented each year in the IEP, beginning at age 16 (or younger if that is determined to be appropriate). In addition, under IDEA 2004, if a student whose eligibility for special education terminates due to graduation with a regular diploma or because he or she exceeds the age of eligibility, the school district must provide a summary of the student's academic achievement and functional performance, including recommendations on how to assist the student in meeting postsecondary goals. This "summary of performance" is vital documentation in the transition to postsecondary education and employment, under IDEA 2004 [section 614(c)(5)].

***Development of self-determination, self-advocacy, and other skills.*** When students with disabilities enter postsecondary education or employment, they will be expected to play an increased role in identifying necessary supports. This underscores the importance of including the development of self-determination and self-advocacy skills as part of the high school transition planning process (Kohler & Field, 2003).

Students with disabilities may also need to develop other educational, employment, and life skills. This should be done in both school-based and community settings and include identification of the accommodations or supports that students will need (Kohler & Field, 2003). Work experience, combined with postschool supports, academic skills, social skills, and job search skills, can improve employment outcomes (Benz et al., 1997; National Council on Disability, 2007). Kohler and Field (2003) noted that work experience and completion of student-identified transition goals were associated with high school graduation and employment.

*Family and community involvement in an inclusive transition planning process.* In addition to student participation, the transition planning process should also include parents and other family members, educators representing multiple disciplines (for instance, special and general education teachers, and school counselor), a transition specialist (Eckes & Ochoa, 2005), and community stakeholders such as employers with an interest in the transition planning (Kohler & Field, 2003; National Council on Disability, 2007). Family involvement can increase higher education attendance and assessment scores, improve students' self-esteem and confidence, and reduce dropout rates (Blackorby & Wagner, 1996). Additionally, Phelps and Hanley-Maxwell (1997) note that families' skills in coping with students' support needs will influence both progress towards educational outcomes and overall success in the adult community.

Family engagement can be enhanced by direct, routine communications such as face-to-face conferences, telephone contacts, open houses, teacher notes, and classroom visits (Kohler & Field, 2003). Practices that focus on family involvement—such as empowerment and training—facilitate family members' participation and increase their abilities to work effectively with others in the transition planning process (Kohler & Field, 2003).

*A coordinated, collaborative effort among community agencies.* Transition goals are more likely to be achieved when schools and communities build capacity together to serve students' transition needs (Benz et al., 1995; Devlieger & Trach, 1999). Kohler and Field (2003) and the National Council on Disability (2007) found that effective collaboration among organizations in the public and private sectors offers opportunities for individual students, while also addressing community issues that influence student services. Implementing an integrated system is instrumental in sustaining student-focused planning and student development practices, such as work experiences and student involvement in planning (Kohler & Field, 2003; National Council on Disability, 2007).

Effective collaborations, such as that between Milwaukee County's Division of Disability Services and the Milwaukee Public Schools, should be established with appropriate community agencies, including providers of transportation as well as rehabilitation and human services (National Council on Disability, 2007). These collaborations are especially important because students and parents may be unfamiliar with the terminology and operating procedures used by multiple adult-serving agencies. Hart, Zimbrich, and Whelley (2002) recommend that states and localities adopt student- and family-centered strategies that include:

- Interagency cooperation to coordinate services (including the use of transition specialists) and to streamline eligibility, intake, and referral procedures.
- Clear and uniform mechanisms for information sharing and communication across agencies, including Web-based information clearinghouses and use of accessible language that reflects cultural competence.
- Resource mapping and pooling of case management and other resources across disciplines.
- Identifying and addressing service gaps with input from students and their families.

*Appropriate use of technology.* There should be careful planning for the provision and/or transfer of technology, as needed. The transition process should include identification of funding sources for the technology, as well as timely training for students in the use of the technology (Mull & Sirlington, 2003).

## CONCLUSION

Policymakers and administrators face choices in structuring interventions to promote successful transitions from high school. A number of promising approaches are available to support students' preparation for the educational and workplace demands of the new economy. To maximize the effectiveness of these approaches, special attention should

be paid to increasing the rigor, relevance, and engagement of the high school curriculum, including for students who have traditionally faced barriers to successful postsecondary transitions.

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## ADDITIONAL RESOURCES

Extensive resources are available online for readers interested in more detailed discussion of the topics addressed in this Issue Brief. Among these resources are:

### Overview of the Transitions From High School

Bangser, M. (2008). *Evaluating the impact of strategies to promote successful transitions from high school*. Washington, DC: American Institutes for Research, National High School Center.

Lerner, J. B., & Brand, B. (2006). *The college ladder: Linking secondary and postsecondary education for success for all students*. Washington, DC: American Youth Policy Forum. Retrieved February 5, 2008, from <http://www.aypf.org/publications/The%20College%20Ladder/TheCollegeLadderlinkingsecondaryandpostsecondaryeducation.pdf>.

McDonough, P. M. (2004). *The school-to-college transition: Challenges and prospects*. Washington, DC: American Council for Education. Retrieved February 5, 2008, from [http://www.acenet.edu/bookstore/pdf/2004\\_IPtransitions.pdf](http://www.acenet.edu/bookstore/pdf/2004_IPtransitions.pdf).

The Pathways to College Network Web site. Retrieved February 8, 2008, from <http://www.pathwaystocollege.net>.

Editorial Projects in Education, Inc. (2007). Diplomas count: Ready for what? Preparing Students for college, career, and life after high school. *Education Week*, 26(40). Retrieved February 5, 2008, from <http://www.edweek.org/ew/toc/2007/06/12/index.html>.

### Resources for States

The American Diploma Project Web site. Retrieved February 8, 2008, from <http://www.achieve.org>.

The National Governors Association (NGA) and its Center for Best Practices and Honor States Program have produced Issue Briefs and other helpful materials, including:

Conklin, K. (2005). *Improving the high school-to-college transition through leadership and governance*. Retrieved February 5, 2008, from <http://www.nga.org/cda/files/0504HIGHSCHOOLTRANSITION.pdf>.

Conklin, K., & Smith, S. (2004). *Stronger fiscal incentives can improve high school and postsecondary outcomes*. Washington, DC: National Governors Association. Retrieved February 5, 2008, from <http://www.nga.org/Files/pdf/0407HIGHSCHOOL.pdf>.

Ewell, P., & Boeke, M. (2007). *Critical connections: Linking states' unit record systems to track student progress*. Washington, DC: Center for Higher Education Management Systems. Retrieved February 14, 2008, from [http://www.luminafoundation.org/publications/Critical\\_Connections\\_Web.pdf](http://www.luminafoundation.org/publications/Critical_Connections_Web.pdf).

National Governors Association. (2003). *Ready for tomorrow: Helping all students achieve secondary and postsecondary success*. Washington, DC: Author. Retrieved February 5, 2008, from <http://www.nga.org/cda/files/0310READY.pdf>.

National Governors Association Center for Best Practices. (2007). *Retooling career technical education*. Washington, DC: Author. Retrieved February 5, 2008, from <http://www.nga.org/Files/pdf/0706TECHED.PDF>.

The American Association of State Colleges and Universities provides a summary of state policies to strengthen high school curricula, from the perspective of the American Association of State Colleges and Universities:

The American Association of State Colleges and Universities Web site. Retrieved on February 8, 2008, from: [http://www.aascu.org/policy\\_matters/pdf/v3n7.pdf](http://www.aascu.org/policy_matters/pdf/v3n7.pdf).



### **Dual Credit/Dual Enrollment**

National Alliance of Concurrent Enrollment Partnerships Web site. Retrieved February 8, 2008, from <http://www.nacep.org>.

Community College Research Center at Teachers College of Columbia University Web site. Retrieved February 8, 2008, from <http://www.tc.columbia.edu/centers/ncpr>.

The Early College High School Initiative Web site, which is coordinated by Jobs for the Future. Retrieved February 8, 2008, from <http://www.earlycolleges.org>.

Middle College National Consortium Web site. Retrieved February 8, 2008, from <http://www.lagcc.cuny.edu/mcnc>.

The National Tech Prep Network Web site. Retrieved February 8, 2008, from <http://www.cord.org/ntpnr>.

### **Career and Technical Education**

The U.S. Department of Education's Office of Vocational and Adult Education funds both the National Research Center for Career and Technical Education and the National Dissemination Center for Career and Technical Education:

The National Research Center for Career and Technical Education Web site. Retrieved February 8, 2008, from <http://www.nccte.org>.

The Association for Career and Technical Education, which is dedicated to the advancement of education that prepares youths and adults for successful careers:

The Association for Career and Technical Education Web site. Retrieved February 8, 2008, from <http://www.acteonline.org>.

The California Center for College and Career ConnectEd Toolkit, with resources on how to connect academic and CTE instruction in a multiple pathways approach:

The California Center for College and Career ConnectED Toolkit Web site. Retrieved February 8, 2008, from <http://www.connectedcalifornia.org/toolkit/index.php>.

National Governors Association Center for Best Practices. (2007). *Retooling career technical education*. Washington, DC: Author. Retrieved February 5, 2008, from <http://www.nga.org/Files/pdf/0706TECHED.pdf>.

Meeder, H. (2008). *The Perkins Act of 2006: Connecting career and technical education with the college and career readiness agenda*. Washington, DC: Achieve, Inc. Retrieved February 8, 2008, from <http://www.achieve.org/node/984>.

### **Career Academies**

Career Academies Support Network offers comprehensive staff development and technical assistance for small learning communities and career academies:

Career Academies Support Network Web site. Retrieved February 8, 2008, from <http://casn.berkeley.edu>.

The National Career Academy Coalition, a national network of existing and emerging career academies:

The National Career Academy Coalition Web site. Retrieved February 8, 2008, from <http://www.ncacinc.org>.

The Association for Career and Technical Education Web site. Retrieved February 8, 2008, from: [www.acteonline.org](http://www.acteonline.org).

### **College Preparatory Programs**

The U.S. Department of Education has information on programs such as Upward Bound, Talent Search, and GEAR UP.

The U.S. Department of Education's Web site. Retrieved February 8, 2008, from [www.ed.gov](http://www.ed.gov).

The Advancement Via Individual Development College Prep Program Web site. Retrieved February 8, 2008, from <http://www.avidonline.org>.

### **Scholarship Incentive Programs**

The Lumina Foundation for Education has a number of helpful resources, including:

Davis, J. S. (2001). *Designing a state student grant program: A framework for policy-makers*. Indianapolis, IN: The Lumina Foundation for Education. Retrieved February 8, 2008, from <http://www.luminafoundation.org/publications/synopsis/studentgrantprogram.pdf>.

State Student Assistance Commission of Indiana, 21st Century Scholars Program Web site. Retrieved February 8, 2008, from <http://www.scholars.in.gov>.

Georgia Student Finance Commission, HOPE Scholarship Program Web site. Retrieved February 8, 2008, from <http://www.gsfc.org/hope>.

Oklahoma Higher Education Student Center Web site. Retrieved February 8, 2008, from <http://www.okhighered.org/student-center/financial-aid/grants.shtml>.

### **The Multiple Pathways Approach**

UCLA's Institute for Democracy, Education, and Access' Web site. Retrieved February 8, 2008, from <http://idea.gseis.ucla.edu/publications/mp/index.html>.

### **Transitions for Students With Disabilities**

National Transitional Longitudinal Study Web site. Retrieved February 8, 2008, from <http://www.nlts2.org>.

National Secondary Transition Technical Assistance Center Web site. Retrieved February 8, 2008, from <http://www.nsttac.org>.

National Post-School Outcomes Center Web site. Retrieved February 8, 2008, from <http://www.psocenter.org>.

ThinkCollege Web site. Retrieved February 8, 2008, from <http://www.thinkcollege.net>.

National Dissemination Center for Children with Disabilities Transition 101 Web site. Retrieved February 8, 2008, from <http://www.nichcy.org/resources/transition101.asp>.

[www.idea.ed.gov](http://www.idea.ed.gov) (see especially the section on secondary transitions)

National Collaborative on Workforce and Disability for Youth Web site, funded by the Office of Disability Employment Policy of the U.S. Department of Labor. Retrieved February 8, 2008, from: <http://www.ncwd-youth.info>.

Pacer Center Web site, especially for parents. Retrieved February 8, 2008, from <http://www.pacer.org/tatra>.

## ENDNOTES

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- <sup>1</sup> In this Issue Brief, the term “postsecondary education” refers to a range of activities including 2- and 4-year colleges as well as programs offering technical certificates, apprenticeships, and other advanced training.
- <sup>2</sup> Although this Issue Brief draws primarily on operating experience and studies of program implementation, the challenge of determining the actual impact of these interventions on improving postsecondary success is discussed in a companion Research Brief: Bangser, M. (2008). *Evaluating the impact of strategies to promote successful transitions from high school*. Washington, DC: American Institutes for Research, National High School Center.
- <sup>3</sup> Under the Individuals with Disabilities Education Act (IDEA) 2004, students with disabilities are supposed to start transition planning by age 16, although research suggests that this process should start even sooner (Weidenthal & Kochlar-Bryant, 2007).
- <sup>4</sup> Examples of primarily state-sponsored programs include Indiana’s 21st Century Scholars Program, Georgia’s HOPE Scholarships, and Oklahoma’s Higher Learning Access Program. Primarily privately-sponsored programs include Project GRAD and I Have a Dream. Scholarships also play an important role in federally funded programs such as GEAR UP.

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**The ACT Career Readiness**

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**National Career Readiness Certificate**  
Certify Your Workforce

The National Career Readiness Certificate, issued by ACT, is a portable, evidence-based credential that certifies essential skills needed for workplace success.

**ACT** National Career Readiness Certificate


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**Certification**  
Certify Your Workforce

Features of the ACT National Career Readiness Certificate™



- Evidence-based
- Industry-recognized
- Portable
- Documents essential skills linked to workplace success
- Awarded at four levels: Bronze, Silver, Gold, Platinum

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**ACT** Work Ready Communities

**Certification**  
Certify Your Workforce

**National Career Readiness Certificate benefits**

- Contextualized for the workplace
- Predicts job performance and training success
- User friendly
- Recognized and accepted nationwide
- Over 13,000 employers recognize or recommend



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**National Career Readiness Certificate [NCRC]**  
Certify Your Workforce

- The NCRC is a credential that is used across all sectors of the economy and certifies the following cognitive skills:
  - Problem solving
  - Critical thinking
  - Reading and using work-related text
  - Applying information from workplace documents to solve problems
  - Applying mathematical reasoning to work-related problems
  - Setting up and performing work-related mathematical calculations
  - Locating, synthesizing, and applying information that is presented graphically
  - Comparing, summarizing, and analyzing information presented in multiple, related graphics

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**National Career Readiness Certificate**  
Certify Your Workforce

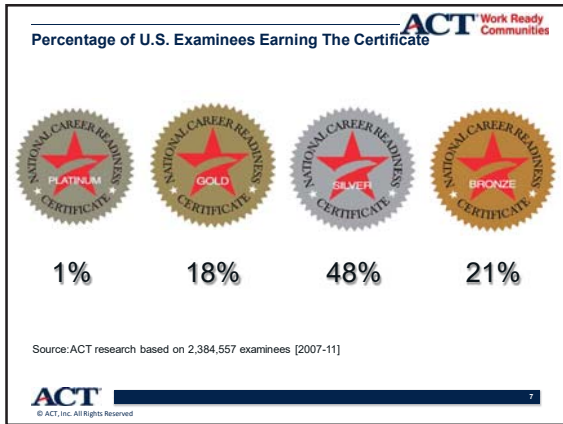
- Individuals can earn the NCRC by taking three WorkKeys assessments
  - Applied Mathematics
  - Locating Information
  - Reading for Information

**80% of profiled jobs utilize all of these skills\***

\*Numbers are based on analysis of 5,618 jobs profiled from 2007 to 2011 in the ACT JobPro database.

**ACT** WorkKeys

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- ### Career Readiness in the United States 2015
- Career Readiness – the skills and proficiency levels needed for a specific career cluster
  - Policies and Practices to Increase Readiness
    - Implementing career readiness standards
    - Creating communities of work and career readiness
    - Implementing policies and practices for data driven decision making
- ACT

### 2020 Employment Projections with WorkKeys Scores

2018	A	B	C	D	E	F	G	H	I	J
2020 National Employment Matrix Title (employment numbers in thousands)	Date with Link to WNET Occupation & Applied Math	WorkKeys Learning Information	WorkKeys Reading for Information	Employment 2020 (thousands)	Job openings due to growth & replacement 2020-2030	Typical education needed for entry	Work experience in a related occupation			
1 Advertising and Promotions Managers	11-2011	5	5	5	43.8	18.1	Bachelor's degree	1 to 5 years		
2 Marketing Managers	11-2012	5	5	5	202.4	76.0	Bachelor's degree	1 to 5 years		
3 Sales Managers	11-2012	5	5	5	362.2	129.7	Bachelor's degree	1 to 5 years		
4 Public Relations and Fundraising Managers	11-2012	5	5	5	72.1	27.9	Bachelor's degree	1 to 5 years		
5 Administration Services Managers	11-2013	4	5	5	285.2	99.8	High school diploma or equivalent	1 to 5 years		
6 Computer and Information Systems Managers	11-2012	4	5	5	168.7	102.8	Bachelor's degree	More than 5 years		
7 Financial Managers	11-2012	6	5	6	373.4	142.8	Bachelor's degree	More than 5 years		
8 Industrial Production Managers	11-2012	5	5	5	164.0	69.0	Bachelor's degree	1 to 5 years		
9 Purchasing Managers	11-2012	5	4	5	72.9	25.4	Bachelor's degree	More than 5 years		
10 Transportation, Storage, and Distribution Managers	11-2012	5	5	5	108.9	53.7	High school diploma or equivalent	More than 5 years		
11 Construction Managers	11-2012	6	5	5	609.6	120.4	Associate's degree	More than 5 years		
12 Childcare Center/Program and Recreation Administrators, Preschool and Elementary and Secondary School Administrators	11-2011	5	5	5	79.9	33.4	Bachelor's degree	1 to 5 years		
13 Secondary School Administrators	11-2012	5	5	5	299.9	89.7	Master's degree	1 to 5 years		
14 Education Administrators, Postsecondary	11-2012	5	5	5	274.0	88.2	Master's degree	1 to 5 years		
15 Education Administrators, All Other	11-2012	5	5	5	26.9	13.4	Bachelor's degree	1 to 5 years		
16 Architectural and Engineering Managers	11-2011	6	5	5	192.0	69.7	Bachelor's degree	More than 5 years		

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### ACT Career Readiness Benchmarks: Aerospace Career Cluster

**The Aerospace Career Cluster**

- Occupations in the aerospace career cluster constituted 18% of total occupational employment in the U.S. in 2012.
- Aerospace careers are projected to grow more than 9% from 2012-2022 with more than 7 million openings due to growth and replacement.

**Opportunities in the Aerospace Career Cluster**

Education Group	O*NET Code	Occupation Title	US Employment 2012	US Projected Employment 2022	Job Openings 2012-2022	Applied Mathematics (Range: 3-7)	Reading for Information (Range: 3-7)	Learning Information (Range: 3-6)
	51-2092	Team assemblers	1,031,800	1,081,300	212,000	3	4	3
	51-9061	Inspectors, testers, sorters, samplers, & weighers	464,300	490,000	127,900	4	4	4
	51-4041	Mechanics	397,500	432,400	125,800	4	4	4
	51-4021	Computer-controlled machine tool operators, metal & plastic	140,300	180,700	59,800	4	4	4
	51-2011	Aircraft structure, surfaces, rigging, & systems assemblers	41,500	41,000	5,300	3	4	4
	51-2011	First-line supervisors of production & operating workers	394,700	584,300	83,700	4	4	4
	49-3011	Aircraft mechanics & service technicians	121,700	124,700	35,600	5	5	5

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### Targets for Instruction

Teaching the skills necessary for workplace success

Education and business need help. Use Targets for Instruction—standards-aligned documents available for each WorkKeys assessment—made a easier to create curricula and instructional strategies for the areas measured by WorkKeys.

Use the Targets for Instruction to:

- Identify skill levels of competencies and learning objectives
- Select developmental materials that match specific WorkKeys skill levels
- Estimate skill levels of materials you currently use
- Bridge the education and business communities together by using WorkKeys as a common language

WorkKeys Targets for Instruction are available for each WorkKeys assessment skill area, and they include:

- Skill building strategies
- Sample work-based tasks and problems for each level
- Guidelines for learning and using workplace materials
- A detailed description of each WorkKeys skill area and level

Also, combine the Targets for Instruction with job profiling for an integrated approach to career planning and workplace training.

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HOME ABOUT IHC FOR EMPLOYERS NEWS CONTACT US

**TENNESSEE**

How many clusters have been created in Tennessee? (Click to view full view)

Anderson  
Bedford  
Benton  
Blount  
Bradley  
Cannon  
Carrick  
Chattanooga  
Clay  
Cocke  
Columbia  
Cumberland  
DeKalb  
Franklin  
Gibson  
Greene  
Hamilton  
Harrison  
Hickman  
Hinds  
Hunt  
Jefferson  
Johnson  
Knox  
Knox County  
Knoxville  
Letcher  
Lincoln  
Madison  
Marion  
Meigs  
Morgan  
Murray  
Obion  
Owen  
Perry  
Polk  
Putnam  
Rhea  
Roane  
Sevier  
Shelby  
Smith  
Stewart  
Sumner  
Tipton  
Union  
Van Buren  
Warren  
Washington  
Wayne  
White  
Wilson  
Woodbury  
Yancey

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Business Certificate

NCRC LEVELS

- + Platinum 70
- + Gold 25,450
- + Silver 42,374
- + Bronze 22,404

TOTAL 98,298

JOB PROFILES COMPLETED 894

EMPLOYERS SUPPORTING 200

NCRC Data 01-01-2004 - 04-30-2016

Community approach that links education and workforce development aligns to economic development and matches people to jobs

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Some Tennessee employers supporting

- Appalachian Power
- Caterpillar
- Eastman
- First Citizens National Bank
- Staffmark
- Over 220 Tennessee employers in every cluster!

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# June Meeting Materials

## Career Forward Task Force

### Agenda

June 30, 2016

*Light Breakfast - (Optional) starting at 8:10 a.m.*

- |       |  |            |
|-------|--|------------|
| I.    | <i>Overview of Today</i><br>Dr. Danielle Mezera<br>TN Assist Commissioner of Education   | 8:30 a.m.  |
| II.   | <i>Profile of Practice (Local/County)</i><br>Beth Duffield<br>Vice President of Workforce Development<br>Rutherford County Chamber of Commerce     | 8:35 a.m.  |
| III.  | <i>Profile of Practice (LEA)</i><br>Arlette Robinson<br>Director of CTE<br>Bradley County Schools  | 9:05 a.m.  |
| IV.   | <i>Break</i>   | 9:35 a.m.  |
| V.    | <i>Profile of Practice (Region)</i><br>Lillian Hartgrove<br>Vice President, Workforce Development<br>Highlands Initiative, Upper Cumberland Region | 9:45 a.m.  |
| VI.   | <i>Transition to Small Group</i>   | 10:15 a.m. |
| VII.  | <i>Small Group Work: Defining a Ready Student</i>  | 10:25 a.m. |
| VIII. | <i>Lunch Break</i>   | 11:30 a.m. |
| IX.   | <i>Small Group Work: Guiding Principles &amp; Recommendations</i>  | 11:45 a.m. |
| X.    | <i>Transition to Large Group</i>   | 12:50 p.m. |
| XI.   | <i>Circling Back</i><br>Assist Commissioner Mezera   | 12:55 p.m. |
| XII.  | <i>Dismissal</i>   | 1:00 p.m.  |



# Pathways Rutherford & Workforce Development

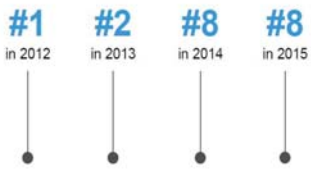


# A Community Snapshot



## JOB GROWTH

Top ten metro in the U.S. for job growth **four years in a row.**



San Jose	4.5%
Riverside	4.3%
Oriando	4.2%
Austin	4.1%
Las Vegas	4.0%
Denver	3.7%
Atlanta	3.7%
Nashville	3.6%
Raleigh	3.6%
San Francisco	3.5%



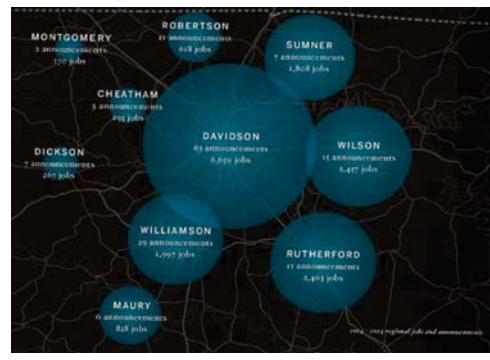
## Stats on Rutherford County

#9	County with highest annual wage of \$43,888 in Tennessee Source: Daily News Journal	100%	Increase in Murfreesboro Population by 2035 from 109K to 199K Source: US Census
\$72K	Avg. HH Income Source: Claris & Census	39%	Job growth in the next 10 Years Source: www.bestplaces.net
3.1%	Unemployment # May 2016 Source: Job4TN	13th	Fastest growing city in America July 1, 2014 – July 1, 2015 Source: Forbes



## Rutherford County Economic Development Snapshot

- Jobs created last year: 2,700
- Recent announcements



## Major Office/HQ Operations

- State Farm (1,662)
- Verizon (1,068)
- Square D/Schneider Electric (900)
- National HealthCare Corp. HQ (700)
- VA CPAC (456)
- Schwan Cosmetics USA (400)
- Franke USA HQ (290)
- WWL Vehicle Services Systems (250)
- SVP Worldwide HQ (160)
- Coming Soon – M-Tek, Inc.



## Rutherford County Economic Development Initiatives

### Target Markets:

- Corporate HQ and office
- Back office/shared services
- Advanced manufacturing
- Logistics/distribution
- Aviation



### Promising Opportunities

**\$19,786**

Annual living wage for a single adult in Rutherford County

**\$38,190**

Annual living wage for a single adult supporting one child

**17.6%**

Poverty rate in Rutherford County

#### Manufacturing

21% growth

**\$62,681**

Average annual wage

#### Health Care

28% growth

**\$42,726**

Average annual wage

#### Finance and Insurance

33% growth

**\$49,307**

Average annual wage

#### Professional, Scientific, and Technical Services

18% growth

**\$40,368**

Average annual wage



Source: MT Living Wage Calculator; OCEW Employees, Non-OCEW Employees, Self-Employed & Extended Proprietors - EMSI 2014.1 Class of Worker

## Largest Industries: Projected Growth

Description	2014 Jobs	2024 Jobs	Change	% Change	2014 Location Quotient	2024 Location Quotient	Current Wages, Salaries, & Proprietor Earnings*
Manufacturing	25,487	30,959	5,472	21%	2.49	2.76	\$62,681
Government	18,285	23,149	4,864	27%	0.95	1.07	\$40,617
Administrative and Support and Waste Management and Remediation Services	12,110	16,271	4,161	34%	1.29	1.37	\$23,879
Retail Trade	16,363	19,624	3,261	20%	1.11	1.14	\$25,435
Health Care and Social Assistance	11,365	14,493	3,128	28%	0.68	0.66	\$42,726
Accommodation and Food Services	11,584	13,707	2,123	18%	1.08	1.05	\$15,283
Finance and Insurance	6,259	8,340	2,081	33%	0.74	0.74	\$49,307
Other Services (except Public Administration)	6,919	8,108	1,189	17%	0.84	0.80	\$22,327
Real Estate and Rental and Leasing	6,071	7,206	1,135	19%	0.87	0.81	\$20,450
Construction	7,327	8,377	1,050	14%	0.98	0.92	\$37,730
Professional, Scientific, and Technical Services	5,372	6,363	991	18%	0.53	0.49	\$40,368

Source: OCEW Employees, Non-OCEW Employees, Self-Employed & Extended Proprietors - EMSI 2014.1 Class of Worker

## Stats on Rutherford County Schools

2

School Districts  
Rutherford County & Murfreesboro

93%

Graduation Rate

4<sup>th</sup>

Largest District in TN  
when combined

21%

CTE Concentrators  
10,307 students enrolled

80+

Number of languages  
spoken in Rutherford  
County & Murfreesboro  
City Schools

99%

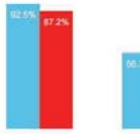
Graduation rate for CTE  
students



## 2015-2016 Rutherford County Higher Education Snapshot

### Graduation and College Going Rates

County Tennessee



Source: TH2 and TH3



### Recent High School Graduate Average ACT



Source: TH2 and TH3



## Post-Secondary Partners



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works

## Our Approach to Workforce Development

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## Our Challenge is the Same as the State's Challenge. . .

There are **more jobs** in Tennessee than qualified applicants and 55% of jobs in TN will require some post secondary by 2025.

There is a **disconnect** between educational preparation and industry growth and needs. Students are spending time and money **not** completing programs that put them into gainful employment.

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works

## The Vehicle for Change: Pathways Tennessee

### Overall Goal

To provide Tennessee students in grades 7<sup>th</sup>-14<sup>th</sup>/16<sup>th</sup> access to rigorous academic/career pathways, which are interlinked with local, regional, and state economic/labor market needs and trends in order to develop and promote a workforce that is educated and skilled in their chosen fields.



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The Rutherford County Chamber of Commerce serves as the intermediary for facilitating the vision and mission of Pathways Rutherford by convening opportunities for educators and industry partners to work together to create something new.

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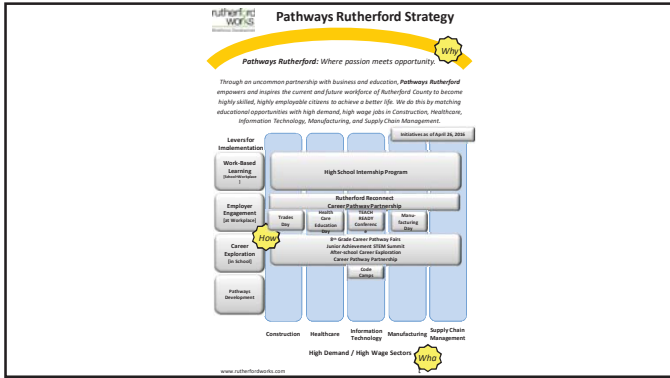
### Vision

**Pathways Rutherford:** Where passion meets opportunity.

### Mission

Through an uncommon partnership with business and education, **Pathways Rutherford** empowers and inspires the current and future workforce of Rutherford County to become highly skilled, highly employable citizens to achieve a better life. We do this by matching educational opportunities with high demand, high wage jobs in Healthcare, Information Technology, Manufacturing, and Transportation and Logistics.

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**Rutherford Works Health Care Council**

**Purpose Statement**

The primary purpose of the Rutherford County Health Care Advisory Council is to address the current and projected shortages of health care professionals in Rutherford County. A secondary purpose is to establish partnership and opportunities for collaboration between health care providers where partnerships have not existed before.

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**Rutherford Works Health Care Council**

Strategy -- Increase the number of health care industry certifications held by Rutherford County Residents

- Goal 1 – 50 new CNA certificates earned by RC Schools high school students by August 2016
- Goal 2 – 30 additional clinical placements for Rutherford County High School students during the 2016 – 2017 school year.
- Goal 3 – Add additional dual enrollment allied health pathway

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**Rutherford County Health Care Council**

rutherford works

**Rutherford Works Manufacturing Council**

**Purpose Statement**

The primary purpose of the Rutherford County Manufacturing Council is to address the current and projected shortages of skilled manufacturing professionals, both in entry level and advance engineering skill sets, in Rutherford County. A secondary purpose is to establish partnerships and opportunities for collaboration between manufacturing and educational leadership where partnerships have not existed before

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**Rutherford Works Manufacturing Council**

Strategy - Increase the number of manufacturing entry level and engineering skill certifications held by Rutherford County Residents

- **Goal 1** – Partner with local K12 education institutions to provide Certified Production Technicians (CPT) certification training for at least 50 Rutherford County High School students enrolled in the Manufacturing Pathway by March 2017.
- **Goal 2** - Manufacturing employers develop partnerships with K12 educational partners to establish an internship/apprenticeship model (Schwann Model) for 10 Rutherford County High School students enrolled in the Manufacturing Pathway during the 2016 – 2017 school year.
- **Goal 3** – Rutherford County Manufacturing Council employer partners and educators will work to develop a larger dual enrollment component for Rutherford County high school students enrolled in the Manufacturing Pathway for 50% of the high schools to roll out during the 2017-2018 school year (CPT and Mechatronics).

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### Rutherford Works Construction Council

**MANUFACTURING DAY**  
GET STARTED NOW!

The Rutherford County Chamber wants you to join with us in the excitement of National Manufacturing Day.

Last year the Chamber celebrated Manufacturing Day by coordinating with 4 different local facilities to host tours for over 100 Rutherford County students. This year we want to make our celebration bigger by doubling the number of facilities visiting manufacturing facilities.

And, new this year, local facilities will have a chance to host a 2-day manufacturing camp.

**How can you support Manufacturing Day?**

- Provide a field trip/ tour
- Host a manufacturing camp (2 days)

**Manufacturing Day Info:**

**DATE:** April 28-29, 2016

**TIME:** 8:00am - 12:00pm (with camp 8:00am - 12:00pm)

**LOCATION:** Various locations in Rutherford County

**CONTACT:** Beth Duffell, Rutherford Works Construction Council, 415.494.4363, www.rutherfordworks.org









### Rutherford Works Construction Council

#### Purpose Statement

The purpose of the Rutherford Works Construction Council is to implement a program to develop a workforce within the trades of the construction industry in Rutherford County and greater Middle Tennessee region to support the anticipated high growth over the next 10 years within the construction industry.




### Rutherford Works Construction Council

#### Goals

- Develop Career Fair Opportunities
- Implement Work Based Learning
- Communicate Wages and Earnings Potential to Students and Parents
- Revive the "Build a House" program within the County High Schools

#### Milestones

- Outline the new construction pathway pilot curriculum for Oakland High School by November 24, 2016.
- Implement the construction pathway pilot curriculum throughout Rutherford County School System by ?????, 2017








### Rutherford Works Tech Community

#### code camp summer 2016






Sponsored by Rutherford Works | Open to ALL students in Rutherford County

- 2015 & 2016 --110 middle & high school students enrolled in code camps
- 2015 RC Schools Received \$138K in Perkins Grant Funding for Rutherford County Schools
  - New computer lab
  - Training for teachers
  - Funding for industry certifications for students





### 8th GRADE Career Pathway Fair

- Provides 8th graders with exposure to the specific pathways they can study at their future high school before they set their high school schedule (9th grade).
- Brings together CTE Teachers, exemplary students and industry experts to share details about classes student will study, opportunities they might be exposed to and the real facts about jobs in our community.
- Held at each middle school
- No cost and only 3 hours of classroom time

### High School Internship PROGRAM

- 2016 Second Year of Program
- First job for 50% of the students
- 39 placements across 15 organizations
- Tied to new State Work Based Learning Standards
- Paid \$10/hour for 64 hours of work and 16 hours of work-based learning

## Teach Ready 2016

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- First ever instructional technology & STEM conference for educators
- "HOW" -- 16 workshops and 2 key note speakers -- teaching practical hands on applications for the classroom
- "WHY" -- 8 field trips to area industry



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## Teach Ready 2016

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I just wanted to let you know how much I enjoyed the TN Ready Conference!! It was Awesome! I'm already planning some lessons using robots, STEM, building cars (Nissan) for my prek classroom. It was so great to partner with you and the local businesses. I have passed the Nissan plant for almost 30 years and never been on a tour. Thanks for taking that off my bucket list! Looking forward to the conference next year and taking a different field trip.

I just wanted to personally thank you for your part in organizing this conference. It was extraordinary! I learned so much and now know my delivery of standards has changed forever. One of my favorite quotes is by Oliver Wendall Holmes, "A mind that is stretched by a new experience can never go back to its old dimensions." My mind has been stretched to see things and understand things that I never knew. I feel so connected to the ultimate outcome of why I teach, and what the business world needs, and how we as teachers can best set our students up for success. Simply tremendous information!!! Please let me in on early registration next year because I'm telling everyone I know that they absolutely must attend next year. I honestly think this conference should be mandatory because the information delivered perfectly aligned with the professionals charged with growing our future!

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### Our Keys to Success

- Facilitator/Intermediary
- Community Impact Model
- Industry Driven
  - *they have to feel the pain and see what's in it for them*
  - *willing to take risks*
- Strong K-12 and Post-Secondary Leadership
- Work with those who want to get set something done and thank the rest of their time.

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## Bradley County Schools Career and Technical Education

Arlette Robinson  
Career and Technical Director



Cleveland Chamber.com

2015 Population 104,091	Bradley County & Cleveland City	Walker Valley & Bradley Central High School
US Bureau of Labor Statistics ranks Bradley County High in Job Growth	Low Unemployment Rate 3.8%	

Post-Secondary: Cleveland State  
Community College and Lee University

### Landscape of Bradley County

Southeast Tennessee  
Market Region is Chattanooga

### Regional & Local Partnerships

Youth CareerConnect Grant  
(Bradley County) \$ 4,499,121 (4  
years)

Southeast Tennessee Pathways  
(Bradley, Cleveland City, Hamilton,  
Marion, McMinn)

Labor and Education Alignment  
Program (Bradley, Cleveland City,  
McMinn, Meigs, Polk)

Other Partners: SE Tennessee  
STEM Innovation Hub, Southeast  
Tennessee Development District,  
TN College Access and Success  
Network, National Career Academy  
Coalition, Bradley Cleveland Public  
Education Foundation, & Tennessee  
Higher Education Commission

- 1. Government Officials**  
City of Cleveland  
Bradley County Government-Mayor
- 2. Post-Secondary Institutions**  
Cleveland State Community College  
Chattanooga State Technical Community College  
TCAT-Athens  
Lee University
- 3. Community Agencies**  
Chamber of Commerce  
Cleveland Associated Industries  
Junior Achievement
- 4. Business and Industry**  
Whirlpool Corporation  
Cormetech  
Signature Healthcare  
Olin  
Life Care Centers of America  
Bradley County EMS  
ClevelandTubing  
Tennova Healthcare  
Quality Machining  
Lonza  
Bradley Healthcare and Rehabilitation Center  
Wacker Polysilicon  
Eaton Corporation  
Mars  
DRW Machinery

### Bradley County Schools Vision Growing Students-Building Futures

**Our desired outcomes: Academic Growth, Confident  
Leaders, Competent Workforce**

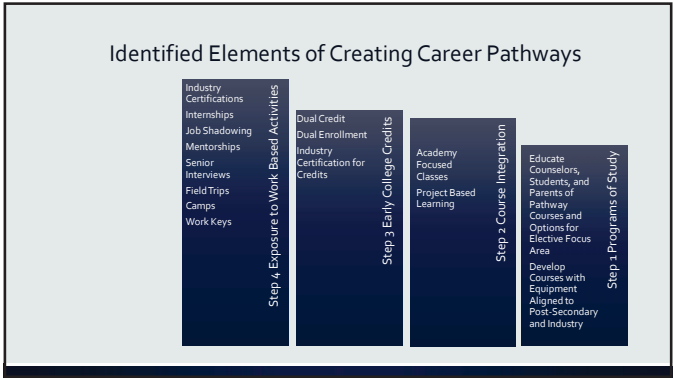
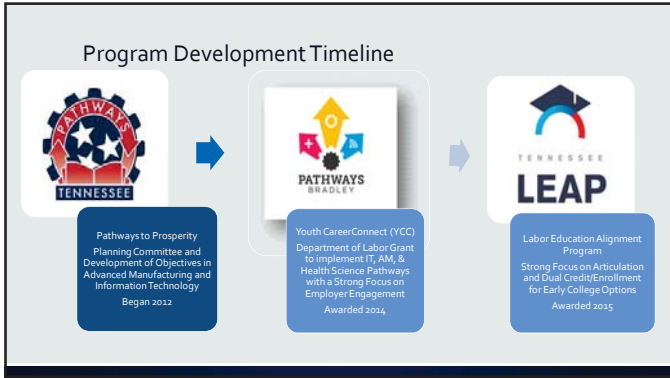
1. Ensure Educational Excellence and Equity for ALL  
students
2. Improve Systems Districtwide to Support Academic  
Outcomes and Meet Student Needs
3. Strengthen School, Family and Community  
Engagement

## Bridging the Gap Between Business and Education

"Educators and business leaders share common goals and challenges; both manage large, complex operations and want to ensure that students graduate high school prepared with the skills necessary to succeed in the workplace or in further educational opportunities. Working together, schools and businesses can achieve more than they can on their own." (Readyby21.org, p. 1)

## Advanced Manufacturing Machining, Welding & Mechatronics

Anatomy of a Pathway



### Elementary Initiative

- Programming**  
LEADERS for Life...Voyage to Greatness is an elementary leadership program focused on building leaders in the present in preparation for the future. Students learn the "Eight Principles for Sailing" while embracing the life skills needed for success in a global society.
- Educators into Industry**  
Administration field trip to Business & Industry linking learning to real world.
- Shadowing High School Students**  
Pilot activity at Waterville Community Elementary School allowed 5<sup>th</sup> grade students to shadow a high school student for the day in a career cluster class.

### Middle School Initiatives

- Student Advisories**
  - Strong Student/Teacher Relationships
  - Career Exposure & Soft Skills Lessons
  - Alignment to High School Programs & Planning
- Expectation Matrix**
  - Guide for School Culture
  - Rules aligned to student Behavior Expectations in all areas of Learning
  - Built around Practicing /Applying Soft Skills
- STEM Programs**
  - Innovations Classes, Project Based Learning, & STEM Camps
  - Coding, Robotics, & 3-D Printing
  - Aligned with High School Advanced Manufacturing, CAD, & Audio Visual Programs

### High School Initiatives

#### Educating the Educators

- Teacher Field Trips**  
Faculty to Factory Day  
Professional Development After School
- Teacher Externship Program**  
Four Days in Industry  
Book Studies  
(The Hard Truth About Soft Skills & Marzano's Teaching 21<sup>st</sup> Century Skills)
- Industry Mentors**  
Paired with Pathways Bradley Teachers for group class mentor program

### High School Initiatives Cont....

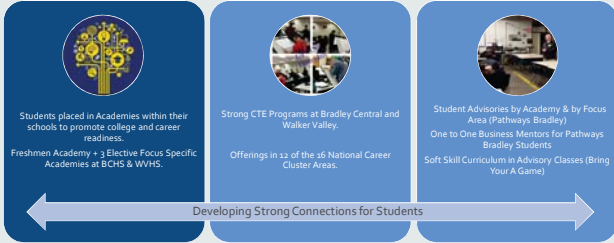
*Industry and Education Work Together : Student Development*

- Career Fairs
- Senior Interviews
- Make It Happen Day
- Student Field Trips to Industry Partners
- Job Shadowing
- Work Based Learning Opportunities Paid/Unpaid



# High School Initiatives Cont....

## Course Work: Student Engagement

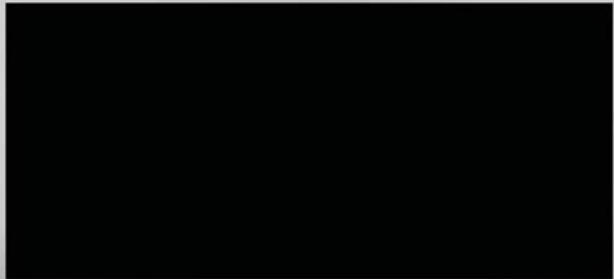


# High School Initiatives Cont....

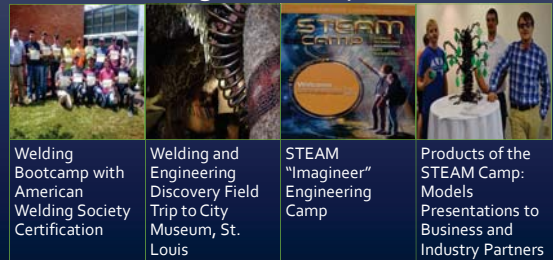
## Beyond the Diploma: Student Opportunities



# Internship Experience



# Summer Programs: Advanced Welding Bootcamp & STEAM Camp



## Program Management & Partnership Recruitment

Pathways Bradley Partnership Meetings Quarterly (All Partners Invited)

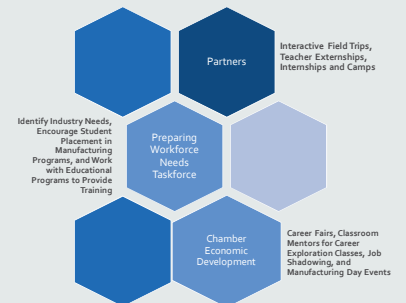
- Other Working Committees:
- Work Based Learning Committee-Teachers, Counselors, Administrators, and Grant Staff
  - Camp Development Committees- Post-Secondary, Teachers, Students, & Grant Staff
  - Industry specific program meetings with business and industry and education

Pathways Course and Articulation Review with Career and Technical Advisory Committee and Pathways Partners Annually in November.

- Partnership Development:
- Create a common understanding: bring education into industry then bring industry into education
  - Create true partnerships through communication and collaboration
  - Review and revise efforts regularly through feedback tools

## Challenges to Program Development

Misperceptions of Manufacturing: Dingy Dark Environments with Low-Skill, Low-Wage Positions  
College for All: Means 4-Year University  
Advanced Manufacturing is "Off Limits" to Students Under 18



**Sustainability**  
Continue to Develop Partnerships  
Theme Fusion  
Denso  
Jones Management  
McKee Foods

**Personnel:**  
Work Based Learning Coordinator will be incorporated into the system budget by 35% per year as the budget allows for continuation of partnership and initiative development.

**Program Costs:**  
Collaboration with partners to continue opportunities through contributions and in-kind donations.  
Utilize community partner resources i.e. Chamber of Commerce, Public Education Foundation and Cleveland Associated Industries to continue student development.

**Professional Development:**  
Continued development of career-themed academies through project-based learning initiatives within the district.  
Utilizing business and industry partners to develop relevant Work Based Learning experiences using the Work Based Learning Continuum as a guide.

**Moving Forward Recommendations for Consideration**

For Pathways Tennessee to be successful and to create a college and career ready state the same emphasis must be placed on career counseling and development, and work related experiences as we place on college planning, testing, and core academic graduation requirements.

**Personnel**

- A dedicated staff member for each high school for career counseling, development of partnerships and work related experiences
- Currently although career counseling is a part of the standards for counselors most will say scheduling and testing take the majority of their time.

**Work Based Learning**

- Assistance with barriers in Work Based Learning Placement esp. in the field of advanced manufacturing
- Continue opportunities for teachers to collaborate through WBL PLCs
- Students gain understanding through experiencing the workforce.

**Funding**

- Funding for equipment and programming at the secondary level.
- In order to prepare a workforce, we need a pipeline of students with knowledge of equipment aligned to post-secondary and industry.

**Questions**

Arlette Robinson  
Career and Technical Director  
arobinson@bradleyschools.org  
423-479-0458  
thinkcte.org

Highlands Workforce  
Development and Education

Lillian Hartgrove  
Vice President

June 30, 2016

## Upper Cumberland



## Upper Cumberland Profile

- Population: 345,381
- Labor Power:
  - Labor Force: 146,430
  - Employment: 139,820
  - Unemployment: 6,610
  - Percent of Labor: 4.5%

## Upper Cumberland Profile

- Notable Companies:
  - Communications: Charter/Spectrum and Frontier
  - Financial: BB & T, Regions Bank, SunTrust, US Bank
  - Distribution: Academy Sports Distribution Center, Perdue Farms
  - Transportation: Federal Express and Averitt Express
  - Manufacturing: APCOM (A O Smith), ATC Automation, Cummins, FICOSA, Flowserve, Jackson Kayak, Lee Company, TUTCO, Oreck/TTI
  - Medical: Cookeville Regional Medical Center, St. Thomas Hospital

## Upper Cumberland Profile

- Secondary Education:
  - Clay, Jackson, Overton, Putnam, Warren and White School Districts
- Postsecondary Education:
  - Tennessee Technological University
  - Tennessee College of Applied Technology
  - Motlow State Community College
  - Vol State Community College

## Highlands Partner Counties



## Mission

**Preparing the citizens of the Upper Cumberland for college and careers**

## Mission

**To establish collaborative programs that will lead to a 21<sup>st</sup> century workforce through enhanced training, education, skill development, and work-based learning opportunities to meet the needs of targeted and existing industries**

## Strategic Goals

- Provide academic/career exploration for students through academic career coach positions beginning with 7<sup>th</sup> grade students through post-secondary education, increasing student access each year.
- Engage regional stakeholders in advancing Pathways TN mission and vision in the Upper Cumberland Region, ensuring alignment to local priorities and strategies.
- Conduct an annual assessment of regional labor force data to determine trends for new pathways creation.

## Strategic Goals

- Establish parental and community engagement methodologies designed to inform and create a culture of understanding and support of the Pathways work.
- Partner with state leadership team to advance the work and to maintain communication with statewide Pathways strategies.
- Identify and tap into funding streams for long-term sustainability of the Pathways work.

## Strategy

- The Rationale:
  - Began by listening to regional stakeholders
  - Major concerns expressed
  - A skilled workforce #1 priority
- Engagement:
  - All voices required
  - Step outside the silos
  - Address the opportunities together
- Assessment of the Priorities
  - Job Creation-Existing and New Industry
  - Labor data
  - Local industry surveys
  - Industry meetings

## Strategy

- Selected Pathways
  - Advanced Manufacturing
  - Health Science
- Formed Teams
  - Secondary
  - Postsecondary
  - Employers
- Assessed Program Continuum for 7-14/16
  - Reviewed curricula
  - Addressed gaps



## Strategy

- Action Steps
  - Reported gaps to Pathways Project Director
  - Determined focus: 7-14/16
  - Emphasize Academic and Career Connections
    - 7<sup>th</sup> grade career exploration modules
    - Middle School Speakers Program
    - 8<sup>th</sup> grade employer based tasks
    - 8<sup>th</sup> grade career fair
    - High School Programs of Study
    - Work-based learning Classes
    - Internship placements
    - Interview Boot Camp and Job Fair
    - Post-secondary alignment and seamless articulation agreements



## Student Job Fair



## Upper Cumberland Approach

- Focus Area Selection
  - Driven by employer demand
  - Economic considerations
    - Growing the economy
    - Attracting new industry
  - Partially backed by labor data
- Eliminating Silos for Success
  - Education the solution
  - Employer input required
  - Convening all to the “table”
- Structure:
  - Oversight Steering Committee: Bi-monthly
  - Action Teams: Monthly initially
  - Academic Career Coaches: Monthly

## Upper Cumberland Approach

- Steering Committee Members
  - Six School District Directors
  - Postsecondary Education Directors
  - Business and Industry Leaders
- Reporting Structure
  - Chamber Board of Directors
  - Highlands Economic Partnership
  - Joint Economic and Community Development Board
  - City and County Governments
  - State Pathways Director and Project Manager



## Upper Cumberland Approach

- Critical Partners
  - ✓ Employers
  - ✓ University
  - ✓ Community Colleges
  - ✓ TCATS
  - ✓ K-12
  - ✓ WIOA
  - ✓ Chambers of Commerce
  - ✓ City/County Government



## Upper Cumberland Approach

- Identified Measures
  - ✓ Enrollment growth in POS and Selected Pathways
  - ✓ Industry Certifications/Credentials
  - ✓ Dual enrollment
  - ✓ Demand for WBL classes
  - ✓ Internship Participation
  - ✓ Job Placements
- Timeline
  - ✓ 2008 Highlands Workforce Development and Education
  - ✓ 2012 Joined Pathways TN Team
  - ✓ 2013 Began Pathways Implementation in Four Districts
  - ✓ 2015 Expanded Pathways to Two Additional Districts

## Planned Growth

- Information Technology Pathways 2016
- Teacher Externship Program 2016
- Summer Bridge Program 2017
- Expand to Other Upper Cumberland Counties
  - PeerVoices
  - Chambers of Commerce
  - Directors of Schools
- Engage More Employers, Ongoing
- Increase Work-Based Learning Placements, Fall 2016

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Successes

- Strong Collaborations and Partnerships
- Fulfilling the Agreement
- District Friendly Competition
- Shift in Programs of Study
- Academic Career Coach Position
- Mechatronics in the High Schools-LEAP Grant
- Student Engagement-Pipeline Growing
- Work-Based Learning Internships
- Perkins Reserve Grant

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Successes



HIGHLANDS  
ECONOMIC PARTNERSHIP

## Stakeholder Engagement

- Started with Simple Requests
  - Career fair speakers
  - Classroom speakers
  - Site tours
  - Parental engagement seminars in the workplace
  - Serving on committees
- Building up to larger asks
  - Work-Based Learning internships
  - Funding support

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Challenges and Opportunities

- Articulation Agreements from TCATs to Community Colleges to the University
- Dual Enrollment Issues
- Program Limitations
  - Secondary: Funding, staffing, population
  - Postsecondary: Progression Gaps
- Student Demand vs. Capacity

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Sustainability

- Leadership Required: Chamber Board of Directors and Highlands Economic Partnership Steering Committee, Chamber CEO and WFD & E VP
- Hard Costs
  - School District Personnel
  - Intermediary personnel
  - Marketing: websites, brochures

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Sustainability

- Funding Sources
  - Public Partners
    - City and County
  - Private Investors
    - Financial Institutions
    - Industry Sectors
    - Philanthropists
  - Grants
    - Local, State, Federal and Foundations

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Task Force Considerations

- Postsecondary Territorial Issues
- Negative Postsecondary Competition
- Capacity Challenges in Secondary Education
- Gaining Parent and Student Support/Interest
- Funding Issues
- Stakeholder Competing Priorities
- Must Have Collaborations
- Need a Respected Convener Organization

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Task Force Recommendations

- Encourage Regional Collaborations and Partnerships
- Expand Pathways to Prosperity Program
- Provide Launch Funding
- Identify Regional Intermediary/Convener
- Foster Silo Elimination
- Obtain Stakeholder Buy In
- Form Highly Committed Action Teams

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Task Force Recommendations

- Results Maintain Engagement
- Utilize Peer Voices for Buy-in
- Be Honest: It's Hard Work and Takes Time
- Evidenced Based Data Will Not Happen Rapidly
- Postsecondary Education Course Alignment and Course Offerings

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Final Thoughts



HIGHLANDS  
ECONOMIC PARTNERSHIP

HIGHLANDS  
ECONOMIC PARTNERSHIP

Questions and Answers



## Career Forward Task Force Meeting Notes

Meeting: Thursday, June 30

### **Welcome from Danielle Mezera Assistant Commissioner College, Career and Technical Education, Tennessee Department of Education**

- Today will begin the deep dive into the process of cultivating the definition of a ready student, the guiding principles of a ready student, and preparing recommendations.
- We will have three different perspectives of practice today: county, district, and workforce development.
- Review of the charge:
  - Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
  - Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary, and workforce readiness into K-14/16 education.
- Review of the guiding questions:
  - How do we know when a student is “career ready” at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
  - How do we ensure that students are progressing along a directed learning pathway aligned with the state’s economic needs and employer needs at the secondary and postsecondary levels?
  - How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?
- We will have two more meetings after this. In July we will have a conversation about return on investment, data collection, and ESSA. In August we will continue work on the definition, recommendations, and guiding principles.

### **Profile of Practice from Rutherford County Chamber of Commerce by Beth Duffield, Vice President of Workforce Development**

- Community Snapshot of Rutherford County
  - #9 county for highest annual average wage
  - Strong job growth
  - 100% growth projected in the next 20 years
  - 2,700 new jobs created last year
  - Right behind Davidson county
  - 23% jobs in manufacturing but there are also significant headquarters such as Verizon, State Farm and working on growing white collar jobs



- Pathways to Prosperity Asset Mapping
  - Manufacturing, health care, finance and insurance, and professional scientific and technical services are the four fastest growing areas of industry
- Rutherford County School System
  - 93% graduation rate
  - ACT scores reflect career readiness in addition to college readiness
  - CTE concentrators in Rutherford county had a higher average ACT score than the state average
  - All students should be enrolled in CTE courses in order to provide career awareness to students
  - Motlow State Community College had the highest increase in enrollment in the state last year showing students are taking advantage of TNPromise
  - Rutherford County has a two year, four year, and TCAT postsecondary option. It will be getting an additional TCAT campus in a partnership with Nissan
- Approach to Workforce Development
  - Challenge is that industry's requirements are not always being met by the school system
  - Approach was pull industry and education together
  - Rutherford County Chamber of Commerce Vision: where passion meets opportunity
  - The Rutherford Chamber of Commerce views its role as the bridge between industry and the education systems
  - Health Care Council
    - Created a strategic plan. A goal was to increase the number of health care industry certifications held by Rutherford County residents
    - Working to expand the number of health care facilities that supports students in the CNA program and lab tech program (high school and postsecondary students)
- The How
  - Strong industry partners leading the charge is very important
  - Four key levers for implementation
    - Career Exploration
      - Career Pathways Partnership
      - Challenge is that programs now are just scratching the surface and that there are old stereotypes about CTE
      - Recommendations: career exploration should begin in the elementary school and be measured, require career exploration for all middle school students, and train school counselors on CTE pathways
    - Employer Engagement
      - Field trips for manufacturing day and trade day. Celebrate national health science day

- Challenge is burn out and fatigue of business partners, industry needs to spread the responsibilities among many business partners
  - Recommendation: build relationships, communicate the value of business/education partnership, and reduce duplication of effort/requests
- Work-Based Learning
  - Internship program- students work 16 hours a week. In 2016 there are 39 placements across 15 organizations. For 50% of students it was their first job. They expect more, achieve more mentality was shown to be true
  - Challenge is scale and scope, supporting the needs and interests of students, and changing the mindset that students who are under 18 are not employable
  - Recommendation: state level incentives for industry to work with students under 18, model Georgia's great promise partnership
- Pathways Development
  - Challenges to pathways are lack of awareness of CTE pathways and rigorous standards, limited availability of the right pathways, and sometimes difficult for postsecondary partners to think outside the box
  - Recommendations:
    - on the local level, move to evidence-based decision making process
    - at the state level, develop transfer pathways from high school to community college similar to the Tennessee Transfer Pathways from community colleges to four years
- Questions
  - Can a student transfer to a different high school based on interest?
    - No there is not open zoning but we are looking into how to support that for students
  - Could you speak about the disconnect between higher education and what employers want?
    - We have a Teach Ready conference to provide teachers understanding of STEM and access to industry partners. The teachers came back and shared how industry identified the need for soft skills. They are not embedded in the curriculum and have it be measured.
    - New freshman coming in don't know how to use a computer.
  - Where do the postsecondary institutions fit in with the partnerships with industry?
    - Postsecondary partners are at the table but not always willing to think outside the box or try something new. They understand that there are requirements that they have to follow. They are meeting with Motlow to share the strategic plan and the importance of a pathways.

## Profile of Practice from Bradley County Schools by Arlette Robinson, CTE Director

- Landscape of Bradley County, located in southeast Tennessee
  - Similar to Rutherford but smaller
  - There is a county and city government
  - Two high schools: Walker Valley and Bradley Central
  - Strong job growth and low unemployment rate
  - Postsecondary: Cleveland State and Lee University
  - Part of the Southeast Tennessee Pathways and LEAP grant
    - Building the pathway went out to business and industry partners to ask for specific parts of the grant initiatives
    - When they went out to the partners they realized there was a disconnect
  - Bradley County Vision: Growing Students-Building Futures.
  - Bradley County Outcomes: academic growth, confident leaders, competent workforce
- Advanced Manufacturing: Machining, Welding and Mechatronics- Anatomy of a Pathway
  - Wanted to have equipment at the local level but industry alone could not support its purchase. Went out to get a Youth Career Connect (YCC), Perkins, and LEAP grant to get the money to upgrade the equipment. There are now two mechatronics labs.
  - Identified Elements of Creating Career Pathways
    - Strong programs of study
    - Course integrations
    - Early college credits
    - Exposure to work-based activities
  - Wanted to get educators into industry and industry into education
    - All administration went to visit industry from elementary through high school
  - Piloted 5<sup>th</sup> graders to shadow with a CTE student in the high school. Encouraged the CTE student to educate 5<sup>th</sup> graders and started the industry awareness
  - STEM programs, interactive programming with middle school
  - All teachers went into an industry- *Faculty to Factory Day* and there are industry mentors
  - The chamber of commerce is supporting the work through career fairs and senior interviews. All seniors are given an interview with an industry specific person
  - Beyond the Diploma program- if any student gets credit in dual enrollment, industry certification, portfolio they are recognized
  - Internship experience video in Advance Manufacturing (Cormetech)
    - Students and industry partners talking about the benefits of internships
  - Goal is to have an activity each year for students in grades 5-12. Currently working on grades 6 and 7
  - Summer opportunities
    - Welding boot camp: All 14 participants sat for AWS certificate and all passed
    - STEAM camp: went to St. Louis to look at engineering. Students had to create a model of the vision and core values and present it to the company.

- A company has donated money to support work-based learning in advanced manufacturing
  - Partnership meetings are held quarterly with all the committees. With industry partner recruitment we have to create a common understanding between industry and schools, Go out and frame it as a partnership. Make sure to review and revise on a continual basis.
  - Challenges
    - Parent misconceptions
    - Parents believe college for all means it has to be a 4 year path
    - We have to support parents' understanding that there are multiple pathways to a career
    - People believe advanced manufacturing is "off limits" to students under 18. Cormetech has shown this is untrue.
  - Bradley County is actively working to undo the misconceptions.
  - They are working to develop partnerships for sustainability. You need to have someone who is actively reaching out to industry and be a champion.
  - Recommendations
    - Counselors need to be there to support students
    - Experience with WBL barriers
    - Support with funding
- Question
  - How involved are the business with content within the programs of study?
    - November we do an annual review of our program of study. Partners are given standards and pacing guides to review. Feedback on what standards need more or less time to align with business requirements.

**Profile of Practice from the Upper Cumberland Region by Lillian Hartgrove, Vice President of Workforce Development (The Highlands Economic Partnership)**

- The Highlands Economic Partnership is in the Upper Cumberland
- To be successful in economic development the region had to show that it had a workforce that would support the growth
- Upper Cumberland: 14 counties, population 345,381
- Notable companies in the communications, financial, distribution, transportation, manufacturing, and medical fields such as academy sports, Suntrust, Federal Express
- Partners in secondary education: Clay, Jackson, Overton, Putnam, Warren and White school districts
- Mission: preparing the citizens of the Upper Cumberland for colleges and careers
- Strategic goals- providing academic/career exploration for students, engage regional stakeholders in advancing Pathways TN and conduct an annual assessment of regional labor force data, establish parental and community engagement, partnership with state leadership and identify, and tap into funding streams for sustainability

- Academic/career coach positions were created to support students, starting with 7<sup>th</sup> grade
  - Strong partnerships with regional stakeholders
  - Jerre Boyd committed to working with industry and how to sustain it long-term, all the communities have
- Strategy
  - Rationale started by listening to regional stakeholders. Stakeholders were saying that they were missing the qualified workforce that they needed
  - Formed goals and objectives and subcommittees to address each of the goals and objectives and recommend solutions
  - Surveys of existing industry was helpful in making informed decisions
  - Gaps that could not be addressed locally were shared with Nick Hansen (Director, Pathways TN) to get state support
  - Prioritized academic and career connections
    - Annual career fairs, 7<sup>th</sup> grade career exploration models, interview boot camp for seniors to learn how to interview, build a resume, dress for success. Interview boot camp ends in a job fair
  - Alignment with seamless articulation agreements
- Approach
  - Driven by employer demand
  - Work on eliminating silos- one organization cannot affect the kind of change we need Academic coaches meet on a monthly basis
  - Steering committee composed of school, postsecondary, and industry partners
  - Measures: enrollment growth in POS and selected pathways, student industry certifications, dual enrollment, WBL, internships, job placement
  - Began in 2008 by forming the Highlands Workforce Development and Education, joined Pathways Tennessee in 2012
- Planned Growth
  - Starting information technology pathways
  - Starting teacher externship
  - Starting a summer bridge program for at risk students in 2017
  - Expand to other Upper Cumberland counties, engage more employers and increase work-based learning placements
- Success
  - Strong collaboration and partnerships, districts have a friendly competition, shift in programs of study (mechatronics), student engagement is growing, work-based learning is growing
- Stakeholder engagement
  - Started with simple requests such as career fairs and grew to bigger involvement such as funding
- Challenges and Opportunities
  - Articulation agreements

- Dual enrollment- money not always there to support all they are trying to accomplish
  - Demand versus capacity
- Sustainability
  - Takes leadership
  - Leveraging different funding sources
- Considerations for the task force
  - There is competition and it's not always healthy
  - Postsecondary territory issues
  - Capacity challenges in secondary education
  - Gaining parent and student support
  - Funding
  - Competing priorities
  - Must have collaboration
- Recommendations for the task force
  - Continue to expand pathways
  - Encourage regional collaborations and partnerships
  - Provide launch funding
  - Form highly committed action teams
  - Peer voices are very important for buy in
  - Postsecondary course alignment needs to be looked at
- It's about students, it's about their journey in life, it's about the economic stability of the region
- Questions
  - Academic career coaches, what is their qualification and who is their employer?
    - Employee of school district. Not necessarily an educator but wanted them to have industry background. In Putnam County, one coach has a healthcare background and one is has a business background. Neither is a teacher. They support elementary school students with career awareness and then for middle school to high school for exploration. Interact with the students and the community partners. They lead the interview boot camp. Academic coaches meet as a team to collaborate.
  - Middle school strategy, what was the challenge?
    - No answer was given to this question.
  - Data collection, how do we measure and collect the information in order to incentivize additional people?
    - Nick has been working on the data. Some data has to be collected at the local and some at the state level. At the local level, the coaches show the number of students they interact with and what they did. Students start with a Kuder career interest assessment to figure out alignment.

- Territorial issues in postsecondary and dual enrollment issues, can you give an example and what specifically do we need to overcome?
  - TCATs and 2 year are vying for the same students (under the TN Promise), so there is not incentive to collaborate. In Cookeville, the TCAT, 2-year, and 4-year are on the same campus, so there are challenges. Community colleges want to offer what TCATs already do and there is no need to repeat course offerings. We want postsecondary to offer the next level of courses, not the same course as in the high school.
    - Chelle Travis: TCAT and community college vice chancellors are working on a resolution. Additional measures have been put in place at the Board of Regents level for program approval and course improvement.
  - Dual enrollment challenge is with the funding perspective. Students want to take more than four courses, but don't have the funding (through the Dual Enrollment Grant)
    - Suggested solution (Rep. Brooks): In some cases, some courses could move over to dual credit as that is K-12 funding base.
- Silos, are there other examples we should address?
  - No it's the same examples K-12, postsecondary, and industry all being part of the conversation.

Reflection from Dr. Mezera

Highlights to think about during the small group discussion:

- Middle school as very important years
- academic and career integration- students should have an “and” experience not an “either or experience”
- Work-based learning
- Coordinating of stakeholders
- Promoting the program of study
- Early postsecondary opportunities,
- Natural silos and how to break those down.

### **Small Group Work: Defining a Ready Student**

Small groups engaged in discussion around the question “As you consider what a ready student means in Tennessee, what key words come to mind?” Complete notes will be provided in a supplemental document.

### **Small Group Work: Guiding Principles and Recommendations**

Small groups engaged in discussion of the guiding principles to drive the work of defining a ready student. Participants reflected on their beliefs around integrated learning pathways, early postsecondary, career exposure, and postsecondary and career readiness. Complete notes will be provided in a supplemental document.

### **Closing**

Closing remarks from Dr. Danielle Mezera

- Powerful conversations occurred today.
- Between now and July we will compile the information. Each group member will get back the work they did to review. Group members are welcome to add additional information. The small group exercises will be compiled to create a one group document to pull out common themes. Group members will be sent all the groups and the common document to review and add. We will use those summary documents for the July meeting.
- Group members will be sent a draft report around the July meeting.
- Recommendations are setting a stance to provide guidance to any stakeholders who have a vested interest. It will be conveyed to important other stakeholders.





To: Members of the Career Forward Task Force  
From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education  
Date: June 30, 2016  
**Subject: Follow-up from meeting on June, 30, 2016**

### **Meeting Overview**

The fourth meeting of the Career Forward Task Force was held on June 30, 2016, at the First Amendment Center in Nashville, Tennessee. The purpose of the meeting was to (1) learn about the profiles of practice from Rutherford County Chamber of Commerce, Bradley County Schools, and Highlands Initiative in the Upper Cumberland; (2) discuss which key terms should be used to describe a ready student; and (3) discuss the guiding principles of what it means to be a ready student.

The meeting began with opening remarks from Assistant Commissioner of College, Career and Technical Education, Danielle Mezera. Dr. Mezera reviewed charge and guiding questions of the task force. There will be two additional meetings of the task force that will cover return on investment, the Every Student Succeeds Act, and continue the work on defining a ready student and its guiding principles.

### **Profile of Practice from Rutherford County Chamber of Commerce**

Beth Duffield, Vice President of Workforce Development for Rutherford County Chamber of Commerce, provided an overview of the Rutherford Chamber's approach to workforce development. Ms. Duffield began with a snapshot of Rutherford County, which is a member of the Pathways Tennessee network, and has completed an asset mapping revealing that the four fastest-growing industries are: advanced manufacturing, health care, finance and insurance, and professional, scientific, and technical services.

Beth Duffield reviewed the rationale behind supporting workforce development and referenced that a major motivating factor is the disconnect between industry's workforce needs and students' knowledge and skills. Rutherford has centered all of their work on the vision "where passion meets opportunity." In order to support the vision, Rutherford County has leveraged four key elements: career exploration, employer engagement, work-based learning, and pathways development. In **career exploration** Rutherford has created the career pathways partnership, but is grappling with the challenges of students needing more time to engage with career exploration than is currently offered and the old stereotypes about CTE. Rutherford County has begun student field trips to industry to address **employer engagement**, but are facing the challenges of industry burn out without responsibility being shared. In **work-based learning** there is an internship program for students through the Chamber of Commerce but are facing the challenge of scale. The **pathways development** involves supporting the work of career pathways, but there are challenges with lack of awareness and availability. Beth Duffield concluded with recommendations to support each of the four levers.

### **Profile of Practice from Bradley County Schools**

Arlette Robinson, CTE Director in Bradley County Schools, spoke on the “what” and the “how” of building strong, community-wide student pathways. Ms. Robinson began with an overview of Bradley County and the vision of “growing students-building futures.” Ms. Robinson then walked the task force through the anatomy of the advanced manufacturing, machining, welding and mechatronics career pathway. The driving force for the formation of the pathway was the industry demand to have mechatronics equipment at the local level. Bradley County was awarded a Youth CareerConnect (YCC), Perkins Reserve Funding, and LEAP grant, and now has two mechatronics labs.

As part of the YCC grant proposal and cultivation of a pathway Bradley County identified four elements of creating a pathway: strong programs of study, course integration, early college credits, and exposure to work-based learning activities. Within those elements, Bradley County created initiatives at the elementary, middle, and high school level such as the *Faculty to Factory Day*, *Beyond the Diploma Program*, and fifth graders shadowing high school students enrolled in CTE courses. Bradley County has partnered with local industries for student internships and summer experiences. Arlette Robinson concluded by reviewing some challenges and offering the recommendations of prioritizing counselors for student support, working to overcome work-based learning barriers, and sustaining funding.

### **Profile of Practice from the Upper Cumberland Region**

Lillian Hartgrove, Vice President of Workforce Development for the Highlands Economic Partnership discussed the motivations behind forming an economic partnership and provided an overview of the Upper Cumberland Pathways Tennessee region. The mission for the region is to “prepare the citizens of the Upper Cumberland for college and career.”

Lillian Hartgrove discussed her strategic decisions to build partnerships between K-12 education, postsecondary education, and industry in order to support and grow the industry in the region. The strategy started by listening to the needs of the stakeholders and grew into a strategic steering committee that identified and brainstormed solutions to the challenges. The solutions included academic/career coaches in the schools, seamless articulation agreements, and career exploration activities embedded in the curriculum. Ms. Hartgrove outlined three challenges: articulation agreements, funding for dual enrollment, and student demand for programs versus capacity. She concluded with considerations and recommendations for the task force.

### **Small Group Work: Defining a Ready Student**

Small groups engaged in discussion around the question “As you consider what a ready student means in Tennessee, what key words come to mind?” Complete notes will be provided in a supplemental document.



### **Small Group Work: Guiding Principles and Recommendations**

Small groups engaged in discussion of the guiding principles to drive the work of defining a ready student. Participants reflected on their beliefs around integrated learning pathways, early postsecondary, career exposure, and postsecondary and career readiness. Complete notes will be provided in a supplemental document.

### **Closing**

Dr. Mezera concluded the task force meeting by providing an overview of the logistics leading up to the next meeting. Members will be sent their groups notes to review and provide feedback, and then will be sent a complete document of all group discussions to review.

### **Next Meeting Information**

We will meet again Wednesday, July 27 at the First Amendment Center to continue our discussion on postsecondary and career readiness. For additional information on the meeting please see the attached meeting notes document. We look forward to seeing your feedback on the small and whole group discussions before the next meeting.

Thank you for your participation in the June meeting of the Career Forward Task Force. Please feel free to contact [Melissa.Canney@tn.gov](mailto:Melissa.Canney@tn.gov) with any questions you may have.

### **Contact Information**

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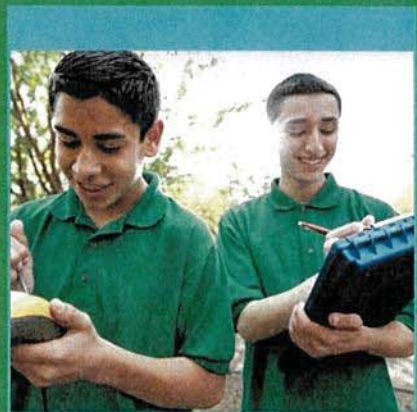
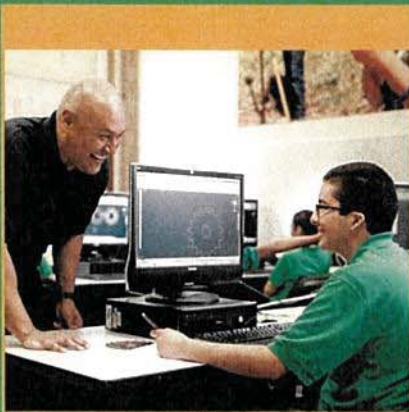
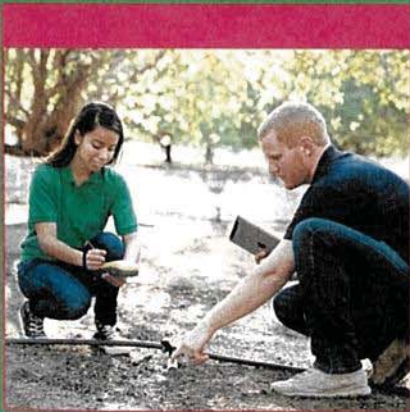
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JOBS FOR THE FUTURE

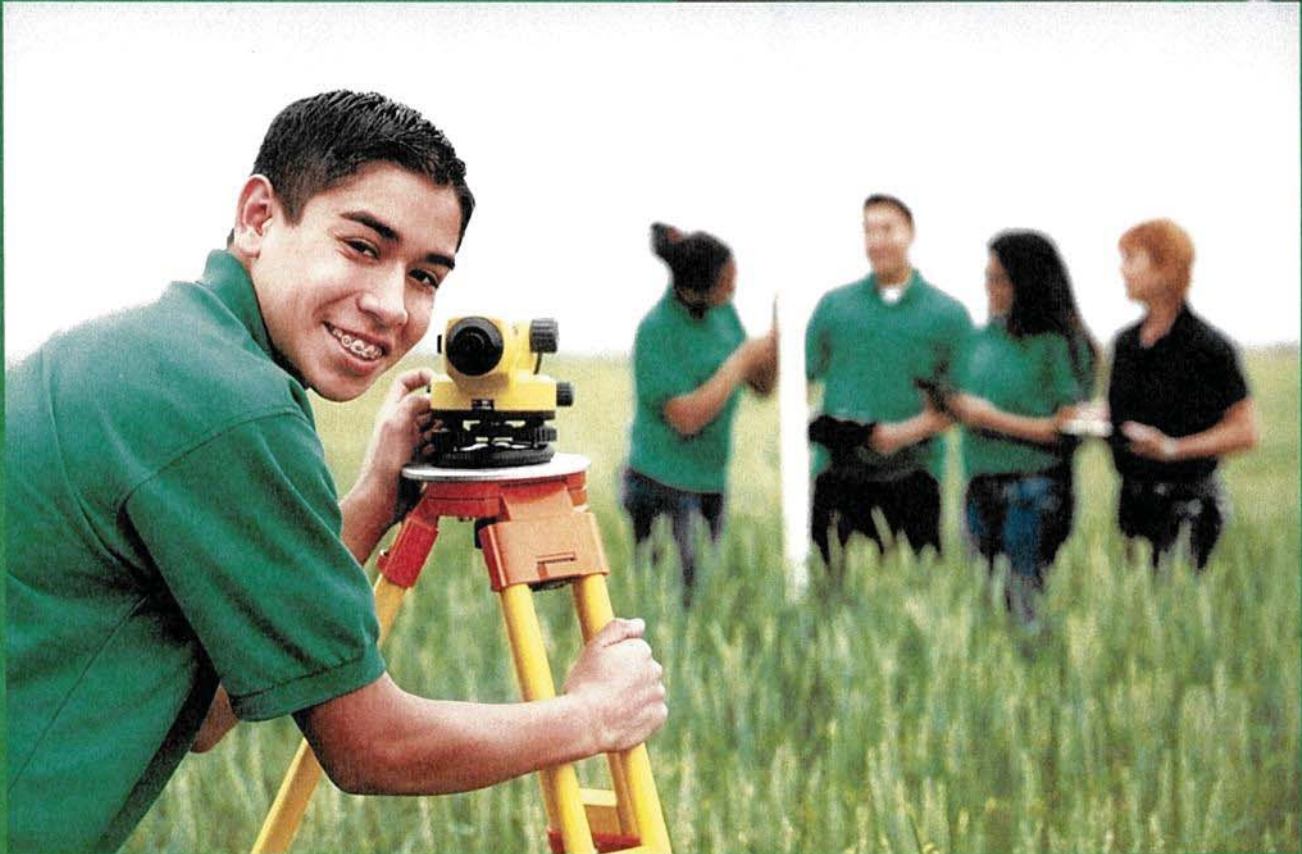
# College and Career Success in the Central Valley



How PACA (the Paramount Agriculture Career Academy)  
is Changing the Educational Experience for Students

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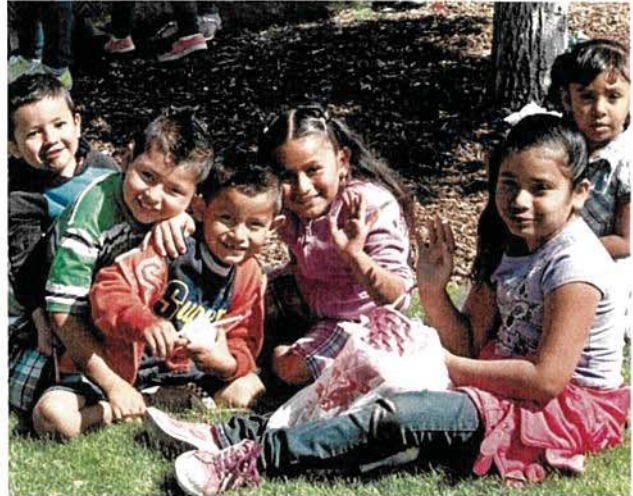
# College and Career Success

in the Central Valley

How PACA (the Paramount Agriculture Career Academy)  
is Changing the Educational Experience for Students

Thad Nodine





Tucked away in California's Central Valley, among golden hills and green orchards, are the towns and cities where families lay down roots. Like other communities across America, these are towns where parents volunteer in schools, churches, and county fairs. Families attend harvest festivals and soccer games. Children dream of becoming firefighters, astronauts, farmers, teachers, and scientists.

Household income in the San Joaquin Valley is below the state average. Poverty rates are higher. But employment is on an upswing and most of the jobs are in agriculture. In McFarland, a welcome sign beckons: "The Heartbeat of Agriculture." A few miles north, a larger sign greets motorists near Delano:



The vacancies are in career positions with high starting salaries that can support a family. They represent only a few of the many openings at Paramount Agricultural Companies. Yet despite these job openings, communities throughout the Valley are experiencing double-digit unemployment. The jobless rate among teens in Kern, Kings, and Fresno counties hovers around 37%. Many young people have to leave the Valley to seek employment.

**It's called the skills gap**—the mismatch between the many good jobs available and the lack of skilled young workers who are qualified for them. Agriculture has become a high-tech industry with careers from science and engineering to business administration, but education in the Valley has not caught up.

**The challenge?** Not enough youth in the Valley are being prepared for college and careers.



## The PACA Promise

The Paramount Agriculture Career Academy (PACA) is a regional partnership that increases college and career success among youth in the lower San Joaquin Valley, from Bakersfield to Fresno. The partnership brings together high schools, community colleges, agriculture production and processing companies, and Paramount Education Programs (PEP), which provides planning and management support. Currently, PACA is targeting four communities: Avenal, Delano, McFarland, and Sanger.

**The Vision:** To prepare youth in the San Joaquin Valley for college and career success—and advance tomorrow’s agricultural, business, science, and technology leaders.

**The Work:** To create a fundamental change in the educational experience, so that more high school students are engaged in a rigorous, relevant curriculum that gives them direct experience in college classes, agricultural careers, and work-based learning.

**The Model:** PACA combines (1) an “early college” model that provides a rigorous academic program of study with substantial college credits while in high school; and (2) a career academy with three agriculture-themed pathways—including work-based learning opportunities—that lead directly to well-paying, mid-level career positions in agriculture.



*“This is about college AND careers for youth in the Central Valley. It’s not either/or. We’re making college relevant and we’re showing that agriculture is innovative, interesting, and cool.”*

— Lynda Resnick

Founder, Paramount Agricultural Companies

### The PACA Model:



## The Pathway Programs

High school partners provide community colleges with classrooms, facilities, teachers, access to students, and student supports. Community college partners provide certificate and degree programs, college credits, oversight, instructors, and student supports. Paramount and other agricultural companies provide guidance in aligning curriculum with industry standards, collaboration on skills mapping, guest speakers, job shadowing, mentorships, internships, and externships.

### HIGH SCHOOLS

Avenal High School

McFarland High School

Paramount Academy (Delano)

Sanger High School

### COMMUNITY COLLEGES

& West Hills

& Bakersfield

& Bakersfield

& Reedley

### CERTIFICATE OR AA DEGREE

> Plant Science

> Agricultural Mechanics

> Agricultural Business Management

> Plant Science and Agricultural Mechanics



PACA's partners for the 2014–15 school year include four high schools and their school districts (Avenal High School, McFarland High School, Sanger High School, and Paramount Academy, a charter school); three community colleges (Bakersfield, Reedley, and West Hills); and six major agricultural companies (POM Wonderful, Paramount Citrus, Paramount Farming, Paramount Farms International, Grimmway Farms, and Olam International). The program will grow each year as incoming classes enroll. By 2018, at least 200 high school students will be earning their associate degrees or technical certificates in agriculture annually.

The pathway programs feature three fields that are in high demand in the Central Valley, that pay well, and that lead to promising careers: agricultural business management, agricultural mechanics, and plant science.

All partners have committed financially to the PACA model, including substantial resources and facilities by schools and community colleges, and commitments for paid internships from partnering agricultural companies. In addition, PACA receives funding from Lynda and Stewart Resnick (founders of Paramount Agricultural Companies and of parent company Roll Global LLC), the California Career Pathways Trust (including critical startup costs such as professional development), and other sources.

## Why PACA Came Together

California's \$45 billion agriculture industry has become more high-tech, specialized, and innovative, with job openings that require a higher level of skills and knowledge compared to a decade ago. Meanwhile, the pipeline of college graduates in the Valley is too small, so many entry-level skilled positions remain unfilled. Many mid- and high-level managers are nearing retirement, without enough young prospects to step into leadership positions.

Skills gaps have been reported as a national phenomenon, and the San Joaquin Valley is no exception. In the Valley, the skills gap is caused by several factors, including:

- Schools and colleges are not preparing enough youth for entry-level career positions in agriculture.
  - High school dropout rates in the San Joaquin Valley are higher than the state average. College-going rates are lower, especially for four-year degrees. The share of residents with a bachelor's degree is much lower in the Valley (16 percent), compared to the state as a whole (31 percent).
  - The agriculture industry has not marketed itself well as a viable choice for innovative, high-tech work.
- Most youth are unaware of the wide range of well-paying careers in agriculture. There's a common—but inaccurate—saying in some circles: "If you don't study in school, you'll end up in agriculture." The truth is that even high school graduates do not qualify for many jobs in today's agriculture industry.
  - Many young people seeking college and careers move away from the Valley, not knowing that there are dynamic career opportunities near their hometowns.

*"Farming has changed. Whether you want to contribute to plant research as a scientist, build sustainable food sources for your community, make irrigation more efficient, or specialize in the mechanics of packing plants—that's all agriculture."*

— **Carole Goldsmith**  
President, West Hills College

## Illustrating the Skills Gap, 2014

348

The number of job openings for entry-level, skilled positions annually at Paramount Agricultural Companies alone.

100%

The percentage of those jobs that call for a college certificate or degree. About 84% of the job postings ask for a certificate or an associate degree. About 16% prefer a bachelor's degree.

38%

The percentage of openings that remains unfilled annually due to a lack of qualified applicants. Many jobs that are filled go to under-qualified candidates who require substantial training.

1,000

The estimated number of agricultural employers in the region. About one of five jobs in the Valley is provided by agriculture.

Source: Paramount Education Programs (PEP), 2014.

## The PACA Model

PACA is unique in drawing from several successful approaches to education reform, while also offering guaranteed paid internships in the agriculture industry.

### 1. Early College Curriculum and Supports

PACA integrates college courses and student supports into the high school curriculum—so that all students earn at least 53 college credits while in high school, and many will earn an associate degree in science for transfer (AS-T, 60 credits). All college credits are free of charge and will be transferable to a four-year university, thereby fast-tracking students' college experience and resulting in major savings for families. PACA's early college approach (see sidebar) is designed to increase college success particularly among low-income youth, first-generation college students, English language learners, students of color, and other young people underrepresented in college. PACA prepares students for college by immersing them in a structured program of college classes and providing them with intensive supports to ensure their success.

At PACA's partnering high schools, the curriculum is aligned with the Common Core and with entry requirements for the University of California (UC) and California State University (CSU) systems, so that all graduates are fully prepared for four-year colleges. (The AS-T degree guarantees admission at CSU as a junior.) The curriculum focuses on science, technology, and mathematics—through hands-on projects, work-based learning, and other instructional methods that draw from the experiences and work of the Central Valley. In addition, students earn a specialized certificate in agriculture and/or an associate of science degree, which provides them with job mobility and increases their chances of pursuing and earning a bachelor's degree.

High school coursework builds toward the college courses, which are taught on high school campuses by partnering community college instructors. High schools provide most of the intensive, wraparound support, including mandatory summer schools, mandatory

## PACA Context: Early College High Schools

PACA goes beyond many early college programs by also infusing career pathways and guaranteed internships into its approach. Over the past decade, more than 280 schools serving over 80,000 students across the U.S. have developed early college programs. Recent outcomes show:

- **High school graduates:** 90% of early college students receive a diploma, compared to 78% of students nationally.
- **College degrees:** 30% of early college students earn an associate degree or a certificate with their diploma, compared to very few students nationally.
- **College credits:** 94% of early college students earn college credits in high school, compared to 10% of students nationally.
- **College enrollment:** 71% of early college graduates enroll in college right after high school, compared to 54% of low-income graduates nationally.
- **College persistence:** 86% of early college graduates who enroll in college stay for their second year, compared to 72% of college students nationally.

Source: M. Webb and C. Gerwin, *Early College Expansion* (Boston: Jobs for the Future, 2014).

*“Coming here and knowing they would pay for college classes—it took a load off my parents.”*

— PACA student



interventions, academic tutoring, and dedicated college and career counseling. Partner community colleges select and oversee the college instructors, determine the requirements for certificates and degrees, and ensure the quality of the courses and degree programs—as they would at their own campuses. They also provide tutoring for the college classes, with experienced college students sitting in lectures with PACA students and then helping them with their assignments.

## 2. Career Academy Focused on Agriculture

PACA integrates its early college curriculum with a career-academy approach that has proven effective in increasing student preparation for college and careers (see sidebar). In particular, PACA builds from the California Partnership Academy (CPA), which is structured as a school within a school. PACA creates **small learning communities** of students who are immersed in rigorous high school and college coursework along **career pathways** that lead directly to certificates, degrees, and mid-level career positions in agriculture. In addition, PACA offers a wide range of **work-based learning** opportunities that include paid internships with Paramount and other agricultural companies.

**Small learning communities.** As a career academy, PACA focuses on a cohort (or small group) of students at each high school who commit to the academy and who share teachers, classes, and other experiences. A team of math, science, English, and career-technical teachers (in agriculture) is assigned to teach the courses, to meet with each other and

*“This is a game changer for a lot of reasons, particularly Paramount’s commitment for internships and jobs. There’s no better way to get kids involved than experience and a paycheck.”*

— David East

Superintendent, Reef-Sunset Unified School District

## PACA Context: Career Academies

PACA goes beyond traditional career academies by also infusing early college and other features into its approach. The number of career academies in the U.S. has grown substantially over the past two decades, to about 7,000 academies in 2010, with about one million high school students enrolled. Studies have shown a wide range of benefits associated with career academies, including:

- Better attendance, more credits earned toward graduation, increased grade point averages, and better retention through high school.
- Lower need for remediation in college.
- Higher earnings over eight years after high school.

Source: David Stern et al., *Career Academies: A Proven Strategy to Prepare High School Students for College and Careers* (Berkeley: Career Academy Support Network, UC Berkeley, 2010).

with students regularly, and to share decision-making about curriculum and instruction. Partnering community college instructors teach college courses—including classes in general education and agriculture—that are aligned with the high school’s early college curriculum and supports.

**Career pathways in agriculture.** In integrating high school and college coursework, PACA also immerses students in a rigorous academic program of study within three agriculture-themed pathways. The pathways were selected because they are in demand in the Central Valley, they pay well at the entry level and beyond, and they lead to innovative, promising careers. Students earn an associate degree and/or a technical certificate in agriculture by the time they graduate from high school—free of charge.

The three pathways are:

- **Agricultural business management.** Students apply principles and technical skills in human resources, purchasing, storing, inspecting, marketing, and selling agricultural products. Average annual income: \$75,198 plus benefits.
- **Agricultural mechanics.** Students focus on skills, knowledge, and training needed for equipment repair, machine operators, maintenance (for example, welding and plumbing), and general administration. Average annual income: \$56,907 plus benefits.
- **Plant science.** Students study the theories, principles, and practices involved with the production and management of food and soil conservation, including irrigation and pest management. Average annual income: \$35,350 for technicians, \$69,493 for scientists plus benefits.

**Work-based learning.** PACA works closely with high school teachers, college instructors, and agricultural companies to integrate work-based learning skills and opportunities into the high school and college curriculum. This includes hands-on, interdisciplinary projects across math, science, and English courses focusing on agricultural themes. PACA guarantees paid internships to every participating twelfth-grade student who fulfills the program's requirements. The internships are aligned with the student's pathway and build on classroom activities. PACA also provides guest speakers, job shadowing, and mentorships related to the agricultural themes being studied. Instructors are provided with externships, shared planning time, and industry visits to help develop relevant projects that are aligned with learning objectives and instructional strategies.

*"We got to see the almond production, how they shake the almonds, clean them, and dry them. We got to see how the irrigation process works. We saw how they package the products. . . It gave us a hands-on opportunity to see what agriculture is all about."*

— PACA student



## The PACA Experience: What PACA Means for Students

In 2014–15, PACA has 232 participants, all of whom are freshmen (see PACA Snapshot). Enrollments will increase with each incoming class over the next few years. The regional collaborative will expand to several additional high schools in 2015 and 2016, as well as to middle schools that serve as feeder schools for the high schools.

PACA is in its inaugural year, but it is already transforming—and ramping up—educational programs for students. The following components illustrate some of the key changes that PACA is bringing to high schools.

### School is ~~Out~~ **IN** for Summer

At partnering high schools, PACA students participate in mandatory summer sessions prior to each school year—and all the summer sessions feature college courses. In 2014–15, each incoming freshman completed a college success course, for which they earned their first college credit. They entered high school as successful college students.

The four-week summer program in 2014–15 also exposed incoming freshmen to rigorous English and math classes, many of which infused agriculture themes into interdisciplinary projects. At Avenal High School, for example, a summer project focused on water conservation. In English class, students completed research and wrote about themes related to water use and conservation. In math, they used statistics and

## Academy Participants

PACA targets all students who want to pursue college and career goals while in high school. Participating students volunteer for the academy and, along with their parents, must commit to the program's rigorous requirements, such as summer school, after-school interventions, college course-taking, and leadership activities.

PACA participants reflect the demographics of their high schools. About 82 percent of PACA students receive free or reduced-cost school lunch, 50 percent are English learners, and 92 percent are from minority ethnic or racial groups. Less than a third (31 percent) of incoming PACA freshmen are at grade level in math, and about 40 percent are at grade level in English.

Source: Paramount Education Programs (PEP), 2014.

projections to estimate various rates of rainfall, irrigation, and household uses over time. In a computer class, they presented their findings through videos and other formats.

**Summer Camps for Middle School Students.** PACA also works to ramp up expectations and opportunities for younger students in the Valley. For example, PACA provides weeklong overnight camps on college campuses for rising eighth graders in the areas served by PACA's high school partners. At the camps, students experience college firsthand by staying in dorms for

### PACA Snapshot: Enrollment, 2014–15

HIGH SCHOOL	STUDENTS ENROLLED	MALE	FEMALE
Avenal	58	23	35
McFarland	35	21	14
Paramount Academy	63	30	33
Sanger	76	38	38
Total	232	112 (48%)	120 (52%)

Source: Paramount Education Programs (PEP), 2014.

the week and participating in hands-on activities that feature work-based learning. They visit orchards and processing facilities, and talk with field managers and line experts. They witness the power of simulations in surveying and in computer-aided design (CAD). They work with farm machinery and tools, including welding and fabricating. And they see the bigger picture—how the farm operates as a business. From these experiences, they get a firsthand look at a wide range of cutting-edge careers in agriculture. In summer 2014, over 200 rising eighth graders participated in residential camps held by West Hills College, Coalinga; Reedley College; and Bakersfield College.

## Shared Vision and Goals

PACA students have already shared a range of experiences together: summer school, college visits, college classes, and visits to agricultural production plants. They also share the same groups of classes and teams of teachers, which gives them a strong community and support system at their schools. The teachers assigned to the academy meet together to plan instructional strategies and supports. For students, the sense of community also derives from a shared purpose; PACA helps them visualize how each class leads to their college and career goals. “That makes a difference in terms of motivation and engagement,” said Juan Ruiz, principal at Avenal High School. “They know how it all fits together.”

*“It’s true rigor because the students are preparing for college classes much earlier than they traditionally would. We know that our students are college-ready because they’re taking and passing college courses.”*

— Saúl González

Executive Director, Paramount Academy





## Academic Rigor and High Expectations

The high school partners have revised their four-year course sequence and have gone well above the school's graduation requirements to make sure all PACA students enroll in, and pass, the a-g course requirements needed for enrollment in the University of California (UC) and California State University (CSU) systems. Courses are also being revised to ensure that students are prepared for their college coursework. For example, partnering high schools are requiring PACA students to take integrated agricultural biology as freshmen, a course that covers their biology requirement and provides them with content knowledge in science and agriculture they will need for college courses in their agriculture pathways. Most high schools in California schedule biology classes for sophomore year.

## College Classes

At each high school, incoming PACA students completed their first college class in summer 2014, and are taking two college classes during the 2014–15 school year (one each semester). As sophomores, the students will take at least two college courses during the year, depending on the high school they attend (see table, next page). Juniors and seniors will enroll in at least four college courses each year. Students also earn college credits each summer. The college courses are challenging academically, but the high schools provide substantial supports.

*“The main difference [with the college course] is you have to study on your own... If you really want to understand what she's teaching, you have to read the chapters and take notes on your own.”*

— PACA student



## Schedule of College Classes at the High Schools Leading to AS-T Degree, by Career Pathway

Students earn college credits, free of charge, toward an associate degree in science for transfer (AS-T, 60 credits). All participating students are expected to complete the following college courses.

	Paramount Acad. + Bakersfield CC	Avenal HS + West Hills CC	Sanger HS + Reedley CC		McFarland HS + Bakersfield CC
<b>Grade</b>	<b>Ag Business Management</b>	<b>Plant Science</b>	<b>Plant Science</b>	<b>Ag Mechanics</b>	<b>Ag Mechanics</b>
<b>Summer</b>	Microsoft Office	Ag Applications to Computers	Ag Applications to Computers	Ag Applications to Computers	Microsoft Office
<b>9<sup>th</sup></b>	Nutrition	Health	Health	Health	Nutrition
	Spanish 1	Spanish 1	Spanish 1	Spanish 1	Spanish 1
<b>Summer</b>	Art Appreciation	Art Appreciation	Spanish 2	Spanish 2	Art Appreciation
<b>10<sup>th</sup></b>	World History Ag Sales and Comm. Ag, Environment, and Society Intro Ag Business	Intro Plant Science Tractor Operation	Plant Nutrition Pesticides	Construction Tech. Welding 1	Mechanized Ag Ag Safety
<b>Summer</b>	Public Speaking	Psychology	Public Speaking	Physical Education	Public Speaking Physical Education
<b>11<sup>th</sup></b>	Ag Leadership Intro Plant Science Intro Chemistry U.S. History	California Water Weeds and Plants Communications U.S. History	Plant Science Plant Propagation and Production Art Appreciation U.S. History	Electricity and Hydraulics Small Gas Engines Art Appreciation U.S. History	Ag Leadership Small Gas Engines Welding Processes U.S. History
<b>Summer</b>	American Gov't.	American Gov't.	American Gov't.	American Gov't.	American Gov't.
<b>12<sup>th</sup></b>	Ag Internship Ag Economics Macro Economics English Comp. Intro Literature Statistics	Ag Internship Ag Economics Pest Management Critical Thinking Intro Chemistry Statistics	Ag Internship Ag Economics Critical Reasoning General Chemistry Statistics	Ag Internship Ag Economics Welded Structures Machinery Tech. Public Speaking Statistics	Ag Internship Welded Structures Farm Diesel Repair Farm Power Ops. Ag, Environment, and Society Statistics
<b>Post-High School</b>	[No additional credits needed to complete AS-T]	Soils English Comp.	Soils English Comp.	Soils English Comp.	Soils English Comp.

Note: Only college courses are included above; high school classes are not included. High school science classes include ag biology, chemistry, and physics. High school math classes include pre-calculus or calculus.

## Interdisciplinary Projects with Ag Themes

One of PACA's promises is to make education relevant—which can help students achieve the rigor that is required by connecting academic topics to work-related themes. During the summer, PACA teachers from all the high schools met for a weeklong training session, where they worked by subject across high schools—and within high school teams across subjects—to develop interdisciplinary ag-related themes. The instructional planning continued throughout the semester. At Sanger High School, for example, English teachers have been meeting with ag and science teachers and integrating the themed learning into the English language arts standards. As the biology teacher covers a unit on ecology, water usage, and conservation, the English teacher is assigning students to write about water rights and the history of irrigation. Meanwhile, the ag instructor is teaching a related module on crops and pollution. At each of the schools, students create at least one substantial interdisciplinary project each semester.

The joint instructional planning requires schools to create times when PACA teachers can meet with each other regularly, such as common planning periods during school and on short days. It also requires teachers to find time to talk and exchange ideas informally, such as weekly lunch sessions and via email.

## Technology-Infused Instruction

The number-one skill that incoming mid-skilled agricultural employees need, according to executives at Paramount Agricultural Companies, is computer aptitude. That's why PACA schools provide each participating student with his or her own laptop, tablet, or other device, and it's why they integrate computer and software use into everyday assignments and projects—to prepare every student for 21st-century learning and workplace environments. PACA students not only submit homework electronically, but also work on drafts and presentations online (through Google Docs, YouTube and other platforms), so they can access projects

*“This project brings everyone together to make sure students walk out in four years prepared for college and with skills that can help them be employed now. They’ll know how to adapt and problem-solve. They’ll know the language and the math of agriculture, of business. They’ll be able to walk onto a job site and know what people are talking about and be able to contribute.”*

— Jonathan Delano

PACA Coordinator, Sanger High School

online across multiple classes, and work in teams to edit and supplement each other's work. Students also learn to use software appropriate for their agricultural pathways, such as Global Positioning System (GPS), computer-aided design (CAD), geographic information system (GIS), analytic software, and surveying.

In addition, many PACA students enter high school below grade level academically. Providing students with their own laptop or tablet and requiring them to complete their work online allows PACA schools to track student progress readily, identify student needs or trouble areas quickly, and provide personalized interventions and supports to help the students succeed in their rigorous courses.

## Increased Student Supports

From summer school to after school, PACA students are receiving additional tutoring and other supports to help them succeed academically. PACA teachers at each school are providing additional supports to help students with their more rigorous courses. For example, college courses are typically offered two or three days per week; during the off-days, PACA teachers and college tutors

help students master the material. Paramount Academy has an extended day (from 8 a.m. to 4:30 p.m.) for all students, and has set aside a study hall period daily for PACA students. During that time, students work on their high school and college homework and have access to a dedicated teacher for assistance.

Each of the high schools is also providing tutoring and support through its own programs, such as after-school homework assistance and Advancement Via Individual Determination (AVID). For example, Sanger High School provides “push-ins” and “pull-outs.” In push-ins, an “intervention teacher” goes into specific classes—such as math or science—to work during the class period with students who are having difficulties. In pull-outs, students who are identified as struggling are pulled out of an elective in order to help them with math or English. Avenal High School provides a half-hour SMART period (Students Maximizing Achievement, Responsibility, and Time) daily, during which students work on their homework directly with a teacher.

Students at partnering high schools also have access to dedicated counselors who identify students who need help, plan appropriate interventions, and address issues that arise with college courses and instructors on the high school campus. Eventually, the partnering colleges will train students who have passed the college courses to provide tutoring to the high school students. In addition, all the high schools are hiring or have hired a coordinator to manage PACA programs at the school and to facilitate communications and student interactions with partnering community colleges and industry. This will be particularly important when students begin their more extensive interactions with job shadowing and internships.

*“This is a way different experience... Now I study about 4 to 5 hours a day for my high school and college classes.”*

— PACA Students

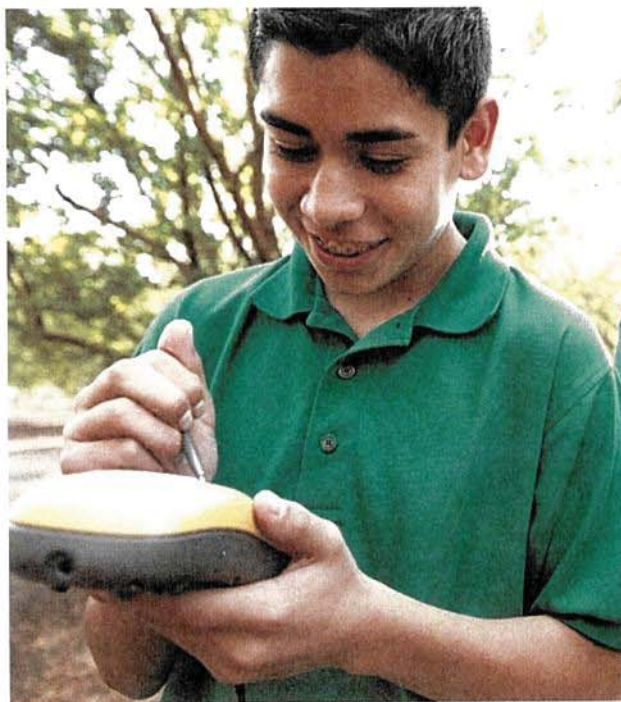
*“What I see is the excitement in students’ eyes, when they see how this program is a fit for them, how it gives them opportunities right now. When their eyes light up, I get excited, too.”*

— Juan Ruiz

Principal, Avenal High School

## A Different Daily Schedule

To accommodate college coursework, most of the schools are implementing a daily class schedule that features longer blocks of time, similar to a college schedule. Avenal High School has changed all classes to a block schedule in which students have different classes on different days. In comparison, McFarland High School has created “a block schedule embedded within the regular school schedule,” said Principal Lori Schultz. At McFarland, periods 1 and 2 are joined for PACA students, so that the longer college classes can be taught during that combined period. Any extra time is used to provide additional supports and tutoring for students.



## How PACA Came Together

One of the unique aspects of PACA is its independent status yet its close connections to schools, colleges, and the agricultural industry in the Central Valley. PACA is a regional partnership that grew from long-standing efforts by Paramount Agricultural Companies—and their parent company, Roll Global LLC—to invest in and improve the education of youth in California's Central Valley.

Paramount has been providing jobs and contributing to communities in the Valley for over 30 years. With its extensive investments in the Valley—including over 20 million fruit and nut trees—the company is here to stay, providing long-term, sustainable employment. The work has been guided by Lynda and Stewart Resnick, founders of Paramount Agricultural Companies and Roll Global. In education, their vision has been consistent: to promote better opportunities for young people in the Valley—through supporting early childhood education, parent engagement, college scholarships, college and career readiness, and other programs. PACA deepens that work by bringing together public schools, community colleges, and industry—while also changing youth attitudes about college, careers, and agriculture.

*“It’s a win-win for everybody.  
It’s the right thing to do for our  
industry, for our communities,  
for families, and for youth in  
this valley.”*

— **David Krause**

President, Paramount Citrus

By early 2013, Paramount Academy, a charter school in Delano, California, had already developed an early college model to support students in earning college credits while in high school. The school's four-year college-going rate for its first graduating class was 48%, which was about three times higher than that of local high schools. During the school's charter-renewal

## Timeline: Leading the Way to PACA

By working with school, college, and industry leaders to provide high school students with college credits and career experiences, PACA offers a prototype for educational change—in the Central Valley and nationally.

### 1994

Paramount Agricultural Companies begin providing large numbers of college scholarships to high school students, as part of their philanthropic support for Central Valley communities.

### 1997

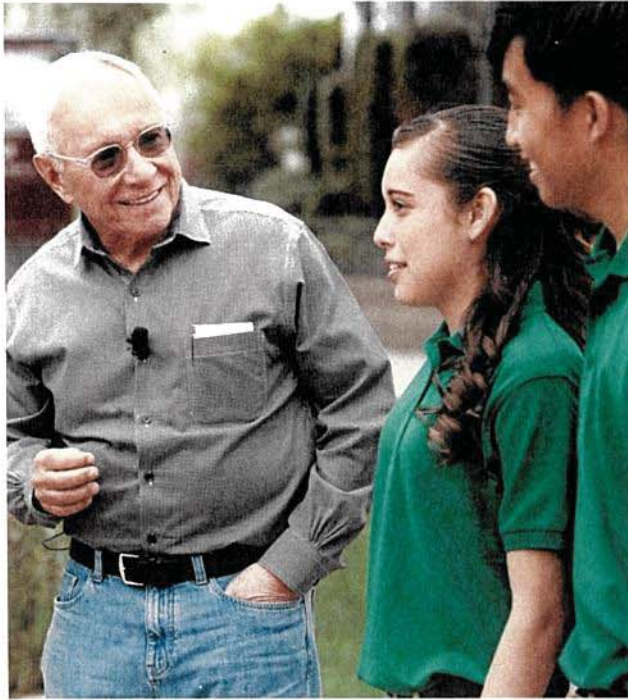
Paramount Education Programs (PEP) is created by Paramount Agricultural Companies to expand their educational contributions and impacts. PEP provides grants to public schools across the Central Valley and funds summer camps, arts education, early childhood programs, college scholarships, and other school programs for students and families.

### 2009

Paramount Academy, a charter school, opens in Delano to increase college-going among Central Valley youth. Paramount Academy, which is supported by Paramount Agricultural Companies, currently serves about 650 students in grades 6 to 12. The school offers an early college model integrated with two pathways: liberal arts and agriculture.

### 2013

Paramount Agriculture Career Academy (PACA) is created as a regional partnership to provide sustainable opportunities for college and career success in the Central Valley. PACA builds on the work of PEP, the Paramount Academy, public schools and colleges in the region, and industry to integrate an early college curriculum with career pathways and work-based learning in agriculture.



*“As a leader in the agriculture industry, we’re building a runway to help teens get from high school to college and into career positions. If we can do it, others can too.”*

— **Stewart Resnick**

Founder, Paramount Agricultural Companies

process, Paramount Academy worked to strengthen its early college model by featuring an agriculture pathway and laying out a more aggressive sequence of college course-taking in high school. PEP and the charter school also expanded its work-based learning components, including job shadowing and internships with Paramount Agricultural Companies.

PACA was formed in 2013 to expand the early college and career-pathways approach beyond the charter school and into several traditional public schools and community colleges in the San Joaquin Valley. PACA already had strong support from industry and it had connections in public schools where PEP had already been distributing grants for some years. As a result, PEP’s first step in developing PACA was to reach beyond these partnerships to approach community colleges in the region. According to Noemi Donoso, senior vice president of education initiatives at Roll Global, “West Hills College was the first to sign on and create a career pathway in plant science with Avenal High School. Their vision and commitment helped to bring other colleges to the table to fill the skills gap and increase educational opportunity in the region.”

Soon thereafter, partnerships were created with McFarland High School and Bakersfield Community College, and with Sanger High School and Reedley Community College. In 2014, PACA applied for a grant from the California Career Pathways Trust, which it received in the summer of that year. The grant provided the partnership with increased support and impact. Around the same time, PACA brought together instructors from the partnering high schools and colleges for training and planning.

Having industry commitment from the start helped PACA expand. In interviews, high school and college leaders said that the participation of the Paramount Agricultural Companies, in backing the project and providing internships, was crucial in helping the school districts and colleges gain support for the substantial changes now underway. They also said they would not have been able to take on the scope of this project without the vision and planning that the PEP team provides. For example, Jonathan Delano, assistant principal and PACA coordinator at Sanger High School, said that PEP continues to bring to the table important contacts that help provide perspective about the work, practical examples of other schools that have launched similar projects, and a vision as to where this can go. He said

that as a result of PEP's strategic support, "we're not trying to recreate the wheel. Our job is to connect all those possibilities to what will work on the ground, for our students."

Over the next years, PACA partners will gather to analyze how well students are performing in the program, meet regularly to discuss and compare findings, and make adjustments along the way. Substantial changes in the educational experiences of students appear to be

underway, but the depth and scope of the transformations will take time. As Sandra Caldwell, president of Reedley College, said, "At the end of the day, our largest purpose is to create systemic economic change in the Central Valley. We approach that purpose through our work to create pathways to college and careers—to get a whole group of students involved in a college-going culture, which will lead to better completion in college and to work opportunities as well."

*"Education is here to multiply options exponentially,  
to where each student is not only receiving  
a rigorous and relevant education, but also their  
horizons are expanding every year."*

— **Saúl González**

Executive Director, Paramount Academy





## **Jobs for the Future**

Jobs for the Future works to ensure economic opportunity for all. Our innovative college and career pathway models give those struggling to succeed access to needed knowledge, skills, and credentials. We partner with education, workforce, and business leaders to understand the labor market and design systems to sustain a pipeline of skilled workers. We advocate with policymakers for state and federal policies to support this work.

## **Paramount Agricultural Companies**

Paramount Agricultural Companies is a group of privately owned, affiliated businesses that comprise the largest farming operation of tree crops in the world. Paramount Farms is the largest vertically integrated pistachio and almond grower and processor in the world. Paramount Citrus is the largest integrated grower, packer and shipper of fresh citrus in the U.S. These operations, which are located in California's Central Valley, are also affiliated with the worldwide leader in fresh California pomegranates and various pomegranate-based products. Paramount's products can be found in the produce aisles of grocery stores nationwide under popular retail brands, including Wonderful Pistachios, Wonderful Almonds, Wonderful Halos and POM Wonderful. Paramount is part of Roll Global, a privately held, \$4 billion international company that offers healthy, iconic brands for healthy lifestyles. For more information, go to [www.roll.com](http://www.roll.com).

## **Paramount Education Programs**

Paramount Education Programs (PEP) is an innovative educational program that is driving positive change in California's Central Valley. As a philanthropic extension of the Paramount Agricultural Companies, PEP funds a host of college and career readiness programs to promote opportunities for young people in California's Central Valley. PEP initiatives include college and career readiness, college scholarships, school grants, summer school programs, arts education, early childhood programs, teacher development and parent engagement. PEP coordinates directly with the Paramount Agricultural Companies to offer a sequence of rich work-based learning experiences for all Paramount Agriculture Career Academy students, including paid internships.



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# College and Career Readiness a summary of state approaches

## Alabama: Prepared 2020

- Prepared graduate definition: “Possesses the knowledge and skills needed to enroll and succeed in credit-bearing, first-year courses at a two- or four-year college, trade school, technical school, without the need for remediation. Possesses the ability to apply core academic skills to real- world situations through collaboration with peers in problem solving, precision, and punctuality in delivery of a product, and has a desire to be a life-long learner.”
- By 2020, increase number of students who are college- and career-ready as measured by receiving: 1) a benchmark score on any section of the ACT test, 2) a qualifying score on an AP or IB exam, 3) approved college or postsecondary credit while in high school, 4) a benchmark level on the ACT WorkKeys, 5) an approved industry credential OR 6) documented acceptance for enlistment into the military. Baseline: 70% 1-year target: 72% 4-year target: 78% 5-year target: 80%

## Alaska: Preparing college, career, and culturally ready graduates

- **Personalized learning and career plans (PLCP)** for all students (grades 6-12)
- 1.5% increase of K-12 foundation funding for CTE
- **DOLWD CTE Plan Implementation Grant Funding:** since FY2012, the Alaska legislature has provided \$625,000 annually for implementation of the CTE Plan through competitive grants to school districts, postsecondary institutions, and non-profit organizations, to enhance existing CTE programs or implement new ones. These grants include a requirement for business partners to be involved, as well as requiring all grant-funded programs to implement Personal Learning and Career Planning, an important foundation of the CTE Plan.
- **Technical Vocational Education Program (TVEP)** funding has been reauthorized through 2017. Non-competitive grant funds are part of a statewide vocational training system, working together with industry and state agencies to provide a comprehensive and unified response to Alaska's training needs.
- **Alaska Education Tax Credit:** Alaska provides a tax credit to businesses that make charitable contributions to support schools and fund educational facilities and programs for Alaska's next generation. The tax credits offset taxes due for the Alaska Net Income Tax (corporate), mining license tax, fisheries business tax, fishery resource landing tax, oil and gas production tax, oil and gas property tax, and insurance tax.

## Arizona

- **College and career ready definition:** demonstrate strong literacy, numeracy, communication, and technology skills, demonstrate cultural competency, demonstrate strong critical thinking and reasoning skills, become artistically literate, be physically literate, articulate career and post-secondary goals, and are civic minded.
- **Strategy for measuring success of definition**
  - Postsecondary Engagement: Enrollment in postsecondary programs without the need for remediation indicates success along the entire pre-K through twelve continuums. By June 30, 2016, implement the state accountability transition plan and the ESEA waiver to meet state

and federal requirements.

- Identify the percent of students in grades 3 through 8 who are on track to be College and Career Ready, as indicated by passing AzMERIT/NCSC in English Language Arts (ELA) and Math.
- Identify the percent of students in grade 12 determined to be College and Career Ready as indicated by passing all 6 required AzMERIT or NCSC end of course assessments in ELA and Math by August 1, 2018.

## Arkansas

- **Smart Core Standards:** Arkansas' college- and career-ready curriculum for high school students. College and career-readiness in Arkansas means that students are prepared for success in entry-level, credit-bearing courses at two-year and four-year colleges and universities, in technical postsecondary training, and in well-paid jobs that support families and have pathways to advancement.
- **College and Career Coach Model (piloted in 2013-15, state-wide implementation in 2015):** to significantly increase the number of underrepresented students who enter and remain in postsecondary education; knowledge of and participation in apprenticeships, and exposure to all forms of postsecondary career trainings and certifications.
  - Community colleges [apply for funding](#) to hire and train a coach as a new administrative/instructional position that works with students within a particular region.
  - Funded through multiple sources: federal grants (TANF, College Challenge Access, & Workforce Investment Act); school districts (National School Lunch Act and Carl D Perkins Career and Technical Education Act); non-profit support (Winthrop Rockefeller Foundation)

## California

- **California Career Pathways Trust:** \$500 million in total funding from the California legislature in the past two consecutive budget acts (2014, 2015).
  - Provides new or expanded sequenced pathways of integrated academic and career-based education and training, aligned to current or emerging regional economic needs, designed to lead students to a postsecondary degree or certification in high-skill, high-wage, and high-growth fields. The overarching goal of this program is to build and sustain robust partnerships between employers, schools, and community colleges in order to better prepare students for the 21st century workplace and improve student transition into postsecondary education, training, and employment.
- **Defining College and Career Readiness: Standards for Career Ready Practice**
  - Developed to describe the fundamental knowledge and skills that students need to prepare for transition to postsecondary education, career training, or the workforce. These standards are not exclusive to a career pathway, a career technical education (CTE) program of study, a particular discipline, or level of education.
  - Standards for Career Ready Practice are taught and reinforced in all career exploration and preparation programs or integrated into core curriculum, with increasingly higher levels of complexity and expectation as a student advances through a program of study.

- **Defining College and Career Readiness:** CTE Model Curriculum Standards (2013) that incorporate the integration of career technical and academic education

## Colorado

- **Postsecondary Workforce Readiness Description:** "Colorado high school graduates demonstrate the knowledge and skills (competencies) needed to succeed in postsecondary settings and to advance in career pathways as lifelong learners and contributing citizens." (Adopted Winter 2016)
- **2009 Concurrent Enrollment Programs Act (\$450,000 for the 2015-16 fiscal year)**
  - The act created the concurrent enrollment program, defined as the simultaneous enrollment of a qualified student in a local education provider and in one or more postsecondary courses, including academic or career and technical education courses, which may include course work related to apprenticeship programs or internship programs, at an institution of higher education.
  - The collective intent is to broaden access to and improve the quality of concurrent enrollment programs, improve coordination between institutions of secondary education and institutions of higher education and ensure financial transparency and accountability.
  - Beyond coordinating and clarifying the existing concurrent enrollment programs, the bills also created the "5th year" [ASCENT program](#) for students to continue participating in concurrent enrollment for one year following their 12th grade year.

## Connecticut

- **Student Success Plan:** individualized student-centered plan that engages every student based on their unique interests and strengths helping them to understand the relevancy of education to achieve postsecondary educational and career goals. The SSP will begin in Grade 6 and continue through high school. It will provide the student support and assistance in setting goals for academic, career, social, emotional, and physical development that meet rigorous high school and postsecondary expectations. The SSP and supporting activities, such as student portfolios, experiences outside the classroom, dual concurrent credit, along with academic/personal records should be electronic and portable following the student from school to school and district to district. **(Public Act No. 11-135, April 2012)**

## Delaware

- **Innovation grants (capped at \$500,000):** developed to award funds through the Reserve Fund under the provisions of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 P. L. 109-270 [Section 112 & 135] to eligible recipients for the purpose of implementing and improving secondary Career and Technical Education (CTE) programs of study. Priorities are aligned with Section 135 and the Delaware State Plan for CTE, which includes the following:
  - Support the implementation of new Delaware state-model CTE programs of study;
  - Enhancement grants for Delaware state-model CTE programs of study;
  - Prepare students for continuing education and career success; and
  - Provide professional development for CTE instructors, administrators, and school counselors.

## Florida

- **Career and Professional Education (CAPE) Innovation Courses**
  - (piloted in select districts AY 2014-15, 2015-16)
  - A new type of course which combines academic and career content with performance expectations that will result in college credit (through AP) and industry certification attainment.
  - According to the statutory framework, each approved CAPE Innovation Course must have at least two third-party assessments, one of which must be associated with an industry certification on the CAPE Industry Certification Funding List.

## Georgia

- **Georgia PathWorks: The Career Preparation Pipeline**
  - Currently evaluating career, technical, and agricultural education pathways. Aligning and adjusting current initiatives to their “birth to career pipeline”
    - Create Georgia PathWorks website
    - Develop 6 full pathways by July 2016 that support the birth to career pipeline
    - Asset mapping one target region through town hall meetings.
- **High Demand Career Initiative**: aligning CTE goals to the Georgia governor’s plans for workforce development.

## Hawaii

- **New Skills for Youth Grant (2016)**: Secured \$100,000 grant to evaluate CTE in the state and develop new, robust career pathways for Hawaiian students

## Idaho

- **Fast Forward Program (2016)**: The Fast Forward program provides every student attending an Idaho public school an allocation of \$4,125.00 to use towards Advanced Opportunities in grades 7-12. The program was expanded by the Legislature in 2016 through the passing of [House Bill 458](#). The fund can be used for overload courses (courses that are taken outside of normal school hours and beyond the full course load offered by the school), dual credit courses, and AP/IB/CLEP/PTE exams

## Illinois

- **Work Experience and Career Exploration Program**: Funded for \$1,793,658 to provide a one- or two-year school-to-work transition program designed for students ages 14 and 15 who are at risk of dropping out of school.
- **Project Lead the Way at The University of Illinois**: Brings early exposure of engineering concepts to students in high school, providing the path to more formal engineering preparation in institutions of higher education or the path to technologically oriented jobs. The project provided \$100,000 for training and professional development for those who teach this core group and engineering-oriented courses in Illinois high schools. In FY14, approximately 175 Illinois high school teachers attended training and/or professional development.

- **Special Populations Leadership Project:** Provides \$275,000 (with \$150,000 of this amount devoted to nontraditional students per Perkins legislation) for statewide professional development and technical assistance to educators for the improvement of instructional services for special populations in CTE with an emphasis on the recruitment and retention of students preparing for a nontraditional career field.
- **SIU Curriculum Revitalization Project:** Provides \$635,000 in professional development opportunities and technical assistance to career and technical educators in Illinois through the development and dissemination of revitalized CTE curriculum in all content areas, curriculum research and planning in each of the approved content areas, and up-to-date technology support to deliver innovative and effective resources

## Indiana

- **New Skills for Youth Grant (2016):** Secured \$100,000 grant to evaluate CTE in the state and develop new, robust career pathways for Indiana students

## Iowa

- **CTE Redesign: Learning That Works For Iowa (House File 2392, May 2016)**
  - The initiative focuses on ways to continue building Iowa's talent pipeline and close the skills gap so that more Iowans have quality career opportunities and employers have the skilled workforce they need. This [legislation](#) will help achieve the Future Ready Iowa goal that 70 percent of Iowans in the workforce have education and training beyond high school by 2025.

## Kansas

- **College and career ready definition:** "an individual has the academic preparation, cognitive preparation, technical skills and employability skills to be successful in post-secondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remediation." (2015)
- **Governor's CTE Bill (2012)** provides tuition reimbursement for high school students enrolled in college-level CTE courses [incentivizing high school students](#) graduating with an industry-recognized certifications that lead directly to high-demand occupations in Kansas through a certification incentive program, transportation reimbursement to school districts transporting high school students off-campus to complete college-level CTE coursework.

## Kentucky

- **Tech Ready Apprentices for Careers in Kentucky (TRACK):** a youth pre-apprenticeship program is a partnership between the Kentucky Department of Education's Office of Career and Technical Education and the Kentucky Labor Cabinet to provide secondary students with career pathway opportunities into Registered Apprenticeship programs.
- **Equitable Funding Study for CTE**
  - Kentucky hired a private firm to analyze the funding for CTE programs, generating a [report](#) and recommendations on how to create an equitable funding scheme for CTE.

## Louisiana

- **Jump Start Program:** a [new paradigm for career and technical education](#) (CTE), requiring students to attain an industry-promulgated, industry-valued credential in order to graduate high school.
  - Schools will receive a 6% addition to the amount the state allocates per student for students enrolled in technical courses.
  - There is a minimum allocation of \$25,000 per school district or \$10,000 per charter/special school. Read more about qualifying courses and the funding [here](#).

## Maine

- No new initiatives other than the federal Perkins grant.

## Maryland

- **Maryland Work-Based Tax Credit:** offers a [tax credit to employers](#) for approved, paid work-based learning programs for students that provide a structured employer supervised learning experience.

## Massachusetts

- **Workplace Education [Planning Grant](#):** designed to encourage partnerships among education providers, business partners and unions (where the workforce is unionized) to deliver contextualized instructional services to meet the needs of employers and the incumbent worker students.

## Michigan

- **Michigan Works!:** Grant program started in 2014 to assist Michigan companies in training their workers at local community colleges. The governor has set aside \$10 million for a Skilled Trades Training Fund to provide technical training for employees in other positions within their organizations.
- Governor allocated \$250,000 in the budget this year for an independent study on the Career Readiness System in Michigan

## Minnesota

- **Planning for Students' Successful Transition to Postsecondary and Employment:** Legislation requires all students starting in 9th grade to have a Personal Learning Plan. This plan should include academic scheduling, career exploration, 21st century skills, community partnerships, college access, all forms of postsecondary training, and experiential learning opportunities. This [guide](#) provides resources in all eight required areas, as well as strategies and partnerships that can help implement this directive.

## Mississippi

- No new initiatives other than the federal Perkins grant.



## Missouri

- **Project Lead The Way (PLTW)**
  - Offers a dynamic high school program that provides students with real-world learning and hands-on experience. Students interested in engineering, biomechanics, aeronautics, biomedical sciences and other applied math and science arenas will discover PLTW is an exciting portal into these industries.
  - PLTW offers a pre-engineering program that offers 6 courses at the high school level, a biomedical sciences program, and a middle school program that exposes students to a broad overview of the field of technology.
  - Grants for funding these programs are offered directly through PLTW

## Montana

- Legislature allocated \$1 million over FY 2012-2014 to enhance student access to career and technical student organizations by increasing the staffing capacity of the six state organizations and providing financial support for student activities.

## Nebraska

- No new initiatives other than the federal Perkins grant.

## Nevada

- **College and Career Readiness Competitive Grant (2015):** the Nevada Department of Education (NDE) was required to set aside funds to support College and Career Readiness programs through a competitive grant process. The intent of these grants is:
  - to create a competitive Science, Technology, Engineering, and Mathematics (STEM) grant programs for students enrolled in middle school and high school in order to become college and career ready;
  - to increase participation in Advanced Placement (AP) courses and increase the AP success rates for high school students;
  - to increase and expand dual enrollment programs for students enrolled in high school, including charter schools, and simultaneously enrolled in college courses.
- Part the Governor's education policy package with investments totaling \$300 million over two years.

## New Hampshire

- No new initiatives other than the federal Perkins grant.

## New Jersey

- **New Skills for Youth Grant (2016):** Secured \$100,000 grant to evaluate CTE in the state and develop new, robust career pathways for New Jersey students.

## New Mexico

- No new initiatives other than the federal Perkins grant.

## New York

- **Career Development Occupational Studies (CDOS) Graduation Pathway Option:** The New York State Board of Regents approved regulations establishing multiple, comparably rigorous assessment [pathways to graduation for all students](#).
  - Multiple pathways recognize the importance of engaging students in rigorous and relevant academic programs. The recently approved regulations recognize students' interests in the Arts, Biliteracy, Career/Technical Education, Humanities and Science, Technology, Engineering and Mathematics (STEM) by allowing an approved pathway assessment to meet the students' graduation requirements.
- **NYS CDOS Commencement Credential:** The NYS CDOS Commencement Credential is a credential recognized by the NYS Board of Regents that certifies a student has the standards-based knowledge and skills necessary for entry-level employment.

## North Carolina

- No new initiatives other than the federal Perkins grant.

## North Dakota

- **[Grants for Innovation \(\\$56,000; 2016-17\)](#):** provide new, innovative science, technology, engineering or innovation programs for students in kindergarten through grade twelve with preference given to projects involving robotics competition.
- **[STEM Innovation and Integration Matching Grant \(\\$143,925; 2016-17\)](#):** encourage business and industry partners to participate in and contribute to STEM activities in K-12 education that innovates and integrates STEM methodologies into existing or new programming.
- **[Students Preparing for Nontraditional Fields \(\\$9,000 per district; 2016-17\)](#):** encourage students to access a full range of occupational choices regardless of gender.

## Ohio

- **CTE Senior Only [Credential Program \(Starting 2018\)](#):** Many seniors have limited course work the last year of high school. This initiative allows districts to implement industry-recognized credential programs to meet the needs of districts and students, as well as provide business and industry partners with a skilled workforce. Learn more [here](#)

## Oregon

- **Regional STEM Hub Program Expansion Grant:** intended to continue to build capacity and address the urgency to address student academic success in CTE and STEM education through programs and activities that have been identified through a needs assessment and gap analysis
- **CTE Revitalization Grant:** established in 2011 through HB 3362. The grants are used to enhance collaboration between education providers and employers to revitalize new or existing CTE programs of study. Grants are awarded each biennium, and were funded at \$9 million during the 2015 Oregon Legislative Session.

## Pennsylvania

- **CTE Innovation Grants**

- **Career and Technology Education Innovation Grants:** \$15 million to support the establishment and enhancement of career and technology education programs that prepare students for success in today's high-skill economy, align with workforce needs, and link students to employment in high-wage/high-demand fields.
- **Career and Technical Education Equipment Grants:** \$5 million in new funding for CTE Equipment Grants, with priority for applicants that show an in-kind or monetary contribution from employers or other partners. Career and Technology Innovation Grant applicants will also receive priority in the awarding of Career and Technical Education Equipment Grants.
- **Career Counseling Grants:** \$8 million to school districts to offer college and career exploration and counseling in middle and high schools in order to help students learn about and prepare for career and occupational choices. Career and Technology Innovation Grant applicants will receive priority in the awarding of Career Counselor Grants.
- Read more about the new grants created through the Governor's 2015-2016 budget [here](#)

## Rhode Island

- **[Skill Up RI](#):** provides funding to school districts that commit to develop innovative programs that will provide career and technical programming aligned to high-growth, high-wage areas identified as key to Rhode Island's economic development and foster partnerships between K-12, postsecondary institutions and private industry partners.

## South Carolina

- No new initiatives other than the federal Perkins grant.

## South Dakota

- No new initiatives other than the federal Perkins grant.

## Tennessee

- **New Skills for Youth Grant (2016):** Secured \$100,000 grant to evaluate CTE in the state and develop new, robust career pathways for Tennessee students.
- **IES-SLDS College and Careers Grant (2015):** Secured \$3.5 million over 4 years to assist students, parents, and educators in making informed choices about postsecondary and career opportunities.
- **LEAP Grant (2016):** \$10 million for regional grants to eliminate skills gaps
- **Public Chapter 351 (2013):** provides funding to eliminate the cost of student exam fees for industry certification and advanced placement exams. This has been operating in pilot form since 2013-14.
- **TN Promise:** Last dollar scholarship for students who enroll into a TN College of Applied Tech or community college.

## Texas

- No new initiatives other than the federal Perkins grant.

## Utah

- No new initiatives other than the federal Perkins grant.

## Vermont

- No new initiatives other than the federal Perkins grant.

## Virginia

- **Governor's Health Sciences Academies:** designed to expand options for students' health science literacy and other critical knowledge, skills, and credentials that will prepare them for high-demand, high-wage, and high-skills careers in Virginia. Each academy is a partnership among school divisions, postsecondary institutions and business and industry.
- **Governor's STEM Academies:** designed to expand options for the general student population to acquire STEM (Science, Technology, Engineering and Mathematics) literacy and other critical skills, knowledge and credentials that will prepare them for high-demand, high-wage, and high-skill careers in Virginia. Each academy is a partnership among school divisions, postsecondary institutions and business and industry.

## Washington

- **Statewide [Course Equivalencies](#) (2014):** course equivalencies between math, science, and CTE courses.

## West Virginia

- **West Virginia [EDGE Initiative](#):** provides multiple opportunities for students entering the workforce in the 21st century. The initiative requires a collaborative partnership between business/labor, postsecondary, and secondary educational levels. Its main purpose is to provide viable career options for individuals through a rigorous, seamless curriculum, work-based learning experiences, and career development. EDGE also allows students to graduate early.

## Wisconsin

- **Financial Literacy Innovation Grants (\$150,000 in 2016-17):** promoting innovation in the teaching of personal financial literacy (PFL) in the classroom. Funds are being awarded through a competitive grant program to schools, partnering with communities, to support the implementation of the Model Academic Standards in order to improve financial literacy among youth.
- **New Skills for Youth Grant (2016):** Secured \$100,000 grant to evaluate CTE in the state and develop new, robust career pathways for Wisconsin students

## Wyoming

- **Distance Education Grant (\$200,000 in 2016-17):** to develop and maintain distance education programs in Wyoming.
- **Dual Language Immersion Grant (\$450,000 in 2014-15 and 2015-16):** to initiate a Dual Language Immersion Program within schools during school years 2014-15 and 2015-16" (2014 Wyoming Sessions Laws 113). The purposes of this grant is to distribute financial assistance to school districts for the provision of Dual Language Immersion Programs and to require the use of a target foreign language during not less than 50% of student-teacher contact time during each school day.

- **Wyoming Trust Fund for Innovative Education (\$250,000 in 2016-17):** to provide innovation in or improvement of public education through the creation of new, different and improved educational opportunities in elementary and secondary schools inclusive of several areas including technical education.

# July Meeting Materials

## Career Forward Task Force

### Agenda

July 27, 2016

*Light Breakfast - (Optional) starting at 8:10 a.m.*

- |       |   |            |
|-------|---|------------|
| I.    | <i>Overview of Today and Remaining Work</i><br>Dr. Candice McQueen<br>TN Commissioner of Education                            | 8:30 a.m.  |
| II.   | <i>TN Succeeds Vision and Opportunities through ESSA</i><br>Commissioner McQueen  | 8:35 a.m.  |
| III.  | <i>Review of Salient Points from Previous Sessions</i><br>Dr. Danielle Mezera<br>Assistant Commissioner of Education          | 9:35 a.m.  |
| IV.   | <i>Break</i>  | 10:00 a.m. |
| V.    | <i>The Life of a Ready Student: What We Know and Don't Know, cont'd</i><br>Dr. Jason Parker<br>Grant Manager and Data Analyst | 10:10 a.m. |
| VI.   | <i>Large Group Discussion: Defining a Ready Student</i><br>Facilitator: Commissioner McQueen                                  | 10:45 a.m. |
| VII.  | <i>Transition to Small Group: Setting Expectations</i><br>Assistant Commissioner Mezera                                       | 11:00 a.m. |
| VIII. | <i>Small Group Work: Guiding Principles &amp; Recommendations</i>   | 11:10 a.m. |
| IX.   | <i>Lunch Break</i>  | 11:45 a.m. |
| X.    | <i>Small Group Work: Guiding Principles &amp; Recommendations, cont'd</i>   | 12:00 p.m. |
| XI.   | <i>Transition to Large Group</i>  | 12:50 p.m. |
| XII.  | <i>Circling Back</i><br>Commissioner McQueen  | 12:55 p.m. |
| XIII. | <i>Dismissal</i>  | 1:00 p.m.  |



## CAREER FORWARD TASK FORCE

July 27, 2016

### CHARGE: CAREER FORWARD TASK FORCE

- Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
- Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.

### GUIDING QUESTIONS

1. How do we know when a student is "career ready" at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state's economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

### FOCUS OF JULY GATHERING

#### Presentations:

1. ESSA and its Role in Affirming Student Career Readiness and Postsecondary Readiness for TN
2. Salient Points from Previous Sessions: Tying it Up
3. Life of a Ready Student, Cont'd

#### Large and Small Group:

- Definition of a *Ready Student*
- Cont'd work on Guiding Principles
- Cont'd work on Recommendations

### AREAS OF FOCUS/REMAINING MONTHS

- March:** Kickoff; focused on Charge and Setting the Stage; high level review of Interconnectedness of Education, Industry, and Career Choices
- April:** Review of Federal Acts and State Approaches around Education, Labor and Industry; Begin defining a "Ready Student" by review of TN's secondary/postsecondary CTE and Work-Based Learning
- May:** Defining a "Ready Student," using Data; Approaches Used to Move a Student to Readiness; Student Voices on Readiness and Transitions
- June:** Structures and Systems: existing Strengths, Alignments, Barriers, Gaps, Culture/Perceptions, Plans and Models of Practice at Local, Regional, State Levels; Defining a *College and Career Ready Student*
- July:** New Approaches to Data Collection, Evaluation, and Assessment to Ascertain "Ready Student;" ESSA; Definition/Recommendations/Guiding Principles-Cont'd Work
- August:** Final Discussion on CF Report - Gain Sign Off; Review of State's Other Major Initiatives and the Role of CF Report; What Happens Next?





## Career Forward Taskforce: ESSA Update

July 27, 2016

Dr. Candice McQueen | Commissioner of Education



## What is ESSA?

### Every Student Succeeds Act

- ESSA contains new policies that will affect existing systems and structures for assessment, accountability, and reporting in Tennessee
- States now have authority to make decisions regarding assessments, goals, school improvement, and accountability standards
- TDOE is currently soliciting input from multiple stakeholder groups to inform the development of a state plan that aligns our strategic plan, Tennessee Succeeds, with the requirements of ESSA



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### ESSA State Plan - Overarching Goal

To develop a Tennessee-specific ESSA state plan, aligned with the department's strategic plan and informed by meaningful consultation with stakeholder groups.



### Timeline for Developing TN's ESSA Plan

Kick-off	Stakeholder Input	Writing the Plan	Stakeholder Feedback	Approving the Plan
May 2016	June–Sept. 2016	Sept.–Nov. 2016	Dec. 2016–Jan. 2017	Feb.–March. 2017

Stakeholders will include directors of schools, principals, educators, parents and students, legislators, governor's office, state board of education, school board members, CORE offices, community organizations, and advocacy groups.



## ESSA State Plan Update

## ESSA State Plan Working Groups

Six working groups:

- Accountability
- Standards and Assessment
- English Learners
- Educator Support and Effectiveness
- Student Support
- School Improvement

Working groups are comprised of individuals who are

- Geographically diverse
- Represent multiple stakeholder groups
- Representative of both policy and practitioner points of view



## Other Opportunities for Input

ESSA feedback form on website:

<http://tn.gov/education/topic/essa-feedback-form>

Many of the current task forces and advisory committees will be hosting input/feedback sessions:

- Career Forward Task Force
- Teacher Advisory Council
- Governor's Teachers Cabinet
- SWD Advisory Council
- CPM Advisory Committee
- Personalized Learning Task Force
- Assessment Task Force 2.0
- TSBA Regional Meetings
- TOSS
- Urban League
- StudentsFirst
- SCORE
- TEA and PET



## ESSA: Opportunities for Tennessee

## Accountability: District-specific

### ESSA Requirements

- States have the ability to design their own **accountability systems** and will no longer submit waivers to USEd.
- In their accountability system, states must consider
  - proficiency on annual assessments
  - a measure of growth on annual assessments
  - graduation rates
  - progress in achieving English language proficiency
  - at least 95 percent of their students participate in all annual assessments
  - measure of school quality and success

### Tennessee Requirements

- New district accountability system** adopted in summer 2015
- Three pathways to demonstrate performance for **both achievement and gap closure** components.
- Acknowledges student growth between achievement levels and growth using **TVAAS** (T.C.A. § 49-1-603, -605, -606)
- Incorporates **ACT/SAT** performance and growth
- Four district determinations of **In Need of Improvement, Progressing, Achieving and Exemplary**
- Districts that fail to meet the 95 percent participation rate in any subject or subgroup designated "**In Need of Improvement.**"



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## Accountability: School-specific

### ESSA Requirements

- Annual report cards** required
- Student achievement on academic assessments for all students and disaggregated by *all* subgroups
- Number and percentage of English learners achieving **English language proficiency**
- Performance on **other academic indicators** for elementary and secondary schools and high school graduation rates
- Performance on **other indicator(s) of school quality or student success** used by the accountability system
  - School quality, climate, and safety, suspensions, expulsions, chronic absenteeism, and more

### Tennessee Requirements

- The annual Report Card must include an **A-F grading system** for schools per new state law
  - TDOE and SBE will work in collaboration to develop A-F grading system criteria
- Current disaggregation only includes four key subgroups (BHN, ED, EL and SWD)
- Some non-academic indicators on the Report Card are attendance, suspension rates, and highly-qualified teachers
- Currently, schools are not included in same accountability framework as districts



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## Measures of School Quality and Success

## Guiding Principles

Indicators in our state accountability framework should:

- **Align** with our vision and strategic plan
- Promote student **college and career readiness**
- Provide **actionable** and timely feedback
- Reward **excellence** and identify **equity** issues
- Provide **additional pathway** for districts to demonstrate success
- Minimize **unintended consequences**
- **Comply** with state and federal law

Tennessee has an opportunity to make a strong statement about measures beyond state test data that we prioritize and believe ultimately contribute to student success after graduation.

## Considered Inputs: Equity and Postsecondary Readiness

- Potential Indicators:
  - Chronic absenteeism
  - Discipline data
  - Social and emotional learning surveys
  - Early postsecondary opportunity and industry credentials
  - Access to effective teachers
  - Other suggested measures



## Considerations and Next Steps in Analysis

## EPSOs: Incomplete, Delayed Data

- The only data that are remotely complete enough for inclusion in accountability would be:
  - The number of available EPSOs in each district (and perhaps school)
  - (Tentative) The number of students participating in each EPSO
- Any other inputs around college and career readiness would be quite lagged (e.g., percent of students still enrolled in college two years after graduating)

## EPSOs: Limiting Available Options

- Because not all students take a summative assessment or because assessment variation is low (i.e., high pass rates) in certain EPSOs, including measures of achievement in all EPSOs is not feasible.
- Options for overcoming incomplete data:
  - Limit EPSOs included in accountability to core subjects
  - Limit which EPSOs are included in accountability (in order to look at achievement)
  - Incentivize certain EPSOs through weighting (e.g., AP participation counts more than local dual credit)
  - Use course progression in CTE career clusters and programs of study, recognizing that course enrollment data have their own challenges

## Discipline: Weighting Overcomes Variation

- While the trepidation around disparities in discipline data is understandable, we could apply a nuanced approach to including such data points equitably.
  - Apply different weighting to expulsions, suspensions (in-school and out-of-school)
  - Apply different weighting to longer suspensions
  - Apply different weighting based on number of incidents (i.e., count subsequent incidents more)

## Access to Effective Teachers: Within-School Distribution

- Access to highly effective teachers accounts for variation in distributions of effective teachers.
  - Minimum required counts for student groups/teachers of different effectiveness
  - Underperforming teachers that may be “difficult to remove” from the classroom are not an inherent disadvantage; rather, their **assignment** is the keystone.

## Opportunity Index: Individual Inputs

- Given the feedback we have received from this and other groups, as well as the data considerations highlighted, the following inputs seem the most appropriate for inclusion in an opportunity index.
  - Chronic absence
  - Access to effective teachers
  - Discipline
  - (Potential) access to early postsecondary opportunities



## Small Group Discussion

## Follow Up Questions

- How do we ensure different schools (e.g., large/small, urban/rural, racially heterogeneous/homogeneous) have the same opportunity to demonstrate a full picture of school quality and student success?
- Are there individual components of these metrics that seem more appropriate for accountability (e.g., expulsions but not suspensions, dual enrollment but not AP courses, etc.)
- What potential downsides/unintended consequences do you foresee?



## Questions?



Districts and schools in Tennessee will exemplify excellence and equity such that all students are equipped with the knowledge and skills to successfully embark on their chosen path in life.

Excellence | Optimism | Judgment | Courage | Teamwork



## Career Forward Task Force Key Takeaways

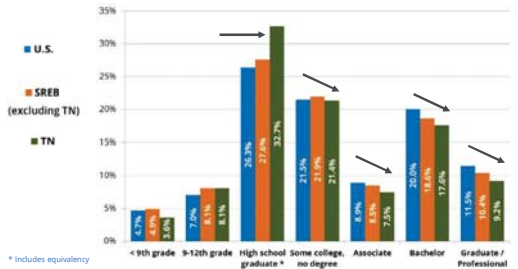
July 27, 2016



March

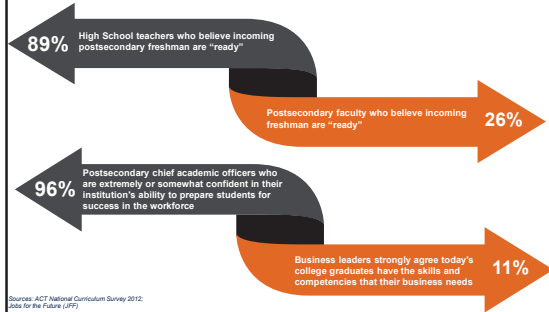
### TRANSITION FROM SECONDARY TO POSTSECONDARY

Educational Attainment of Adult Population (25-64):  
U.S., SREB States, and Tennessee (2014)



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### MISMATCHES IN "READINESS"

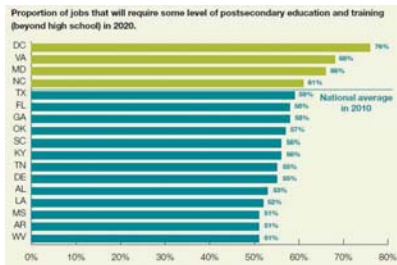


Source: ACT National Curriculum Survey 2012; data for the Future (2012)

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### JOB-to-POSTSECONDARY ATTAINMENT

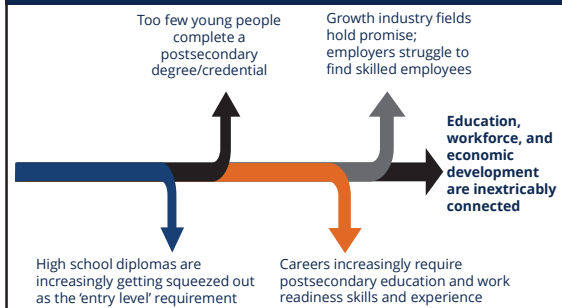
In 2010, the national average for job-to-postsecondary attainment was 59%;  
13 southern states will still not have met this current national average by 2020.



By 2020, the national average is projected to climb to 66%.

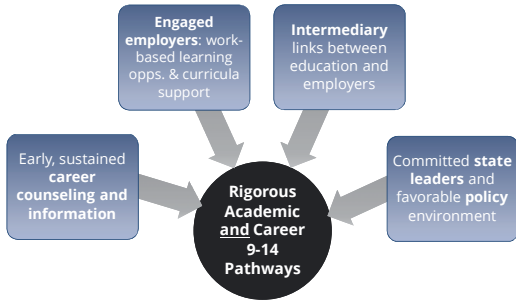
Source: 2012 A Decade Behind Report 5

### EDUCATION/CAREER PATHWAYS



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## KEY STUDENT PATHWAYS IMPLEMENTATION LEVERS



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## A New Model for Education: P-TECH 9-14

- **Focus:** A new grade 9-14 public school model focused on STEM fields and Career and Technical Education
- **Mission:** Enable students to master the skills that they need either to graduate with a no-cost Associates in Applied Science (AAS) degree that will enable them to secure an entry-level position in a growing STEM industry, or to continue and complete study in a four-year higher education institution.

**P-TECH: The pathway from classroom to career to a stronger economy**

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## A New Model for Education: P-TECH 9-14

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**Early College Model - directed approach rather than traditional approach**

**P-TECH: The pathway from classroom to career to a stronger economy**

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April

## MARCH MEETING: TAKEAWAY QUESTIONS

- What are the best predictors of postsecondary and career readiness?
- How are we tracking outcomes? Accountability? Where are our students going and what are they doing?
- Should we be encouraging more Early College opportunities?
- How are we making student "pathways" more obvious and best using our school counselors?
- How are we embedding more authentic experiences for all students?

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## DRIVE TO 55

Governor Haslam initiated the Drive to 55 programs with a mission of having 55% of Tennessee's working age adult population equipped with a college degree or certificate by 2025.

No. Tennesseans (Age 25-64) by Highest Credential	2012	2013	2014	2015
Certificate	136,630	136,794	137,530	138,304
Associate's	250,219	257,289	256,817	260,210
Bachelor's	583,335	582,617	605,594	616,128
Graduate or professional	300,693	317,495	315,247	322,939
<b>Total</b>	<b>1,272,877</b>	<b>1,294,249</b>	<b>1,315,188</b>	<b>1,377,581</b>
% of population age 25-64 with a postsecondary credential	37.3%	37.8%	38.3%	38.7%

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## TENNESSEE WORKFORCE DISRUPTION INDEX

1.4 Million (50%) of Tennessee's current jobs have a high probability of automation



The map above shows the percent of jobs that are vulnerable to automation in each county.

- Educational attainment will improve a community's ability to manage and align with automation; to complement and take advantage of automation.

### Automation will disrupt the workforce landscape - not replace it

- Greater demand for critical thinking, judgment, human perception, creativity, social intelligence
- Technology can complement labor, and boost productivity, incomes, leisure time

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## HIGH QUALITY WORK-BASED LEARNING

- IF high quality WBL is grounded in district/school culture that supports career readiness for all students, and
- IF high quality WBL is meaningful and progressive, allowing students to progress from an early age, then
- High Quality WBL will be measurable by:
  - Pre- and Post- Experience/Exposure Assessments
  - Professional Development/Teacher Supports
  - Early Student Experiences - tracked/captured
  - Student Portfolios Demonstrating Student Growth
  - ROI and Industry Partner Participation Evaluations

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  - Pre- and Post- Experience/Exposure Assessments
  - Professional Development/Teacher Supports
  - Early Student Experiences - tracked/captured
  - Student Portfolios Demonstrating Student Growth
  - ROI and Industry Partner Participation Evaluations

**How do we ensure that we get there?**

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## FEDERAL INTERSECTION POINTS AND STRATEGIES TO CONSIDER

- Accountability systems:
  - Share responsibility across programs/systems
  - Establish limited set of quality indicators
  - Design programs/services around desired outcomes
- Braiding funding streams
- Performance-based/incentive funding
- Connecting Career Pathways, CTE POS, and Sector Strategy initiatives



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## ESSA - KEY INTERSECTIONS WITH WIOA/PERKINS

- State and local plan coordination
- State standards development
- "Well-Rounded Education" & CTE
- "Recognized Postsecondary Credentials"
- Measure(s) of "school quality or student success" and "career readiness"
- Greater support for dual/concurrent enrollment
- Student transitions between secondary and postsecondary education

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May

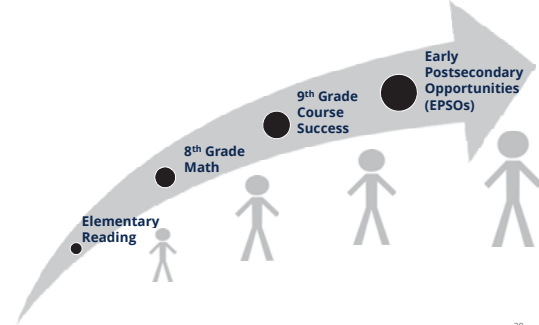
## HIGH LEVEL TAKEAWAYS

What we have learned so far:

- “Career Ready” must be meaningful, rigorous, and relevant for students and must align with employer needs and occupational opportunities.
- Employer engagement in a student’s learning lifecycle must be robust and diverse, enhancing, and assuring what occurs in the classroom and in the work setting.
- There are multiple learning models, approaches and experiences that can impact the development of “ready student.” But which ones are the right ones, and how should they be promoted?
- Federal legislation can be a game changer for states who commit to leveraging shared focuses.
- Student readiness measures cannot predict student success if they are not aligned by both process and outcome.

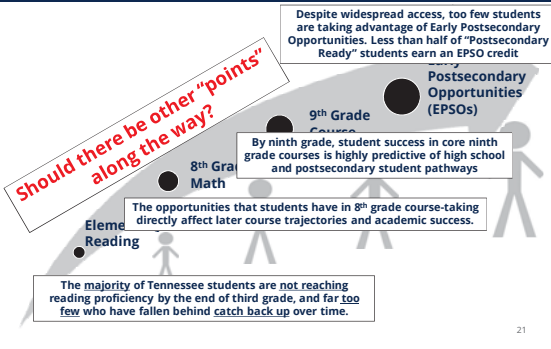
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## “POINTS OF LEVERAGE” ACROSS THE COURSE OF A STUDENT K-12 TRAJECTORY



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## “POINTS OF LEVERAGE” ACROSS THE COURSE OF A STUDENT K-12 TRAJECTORY



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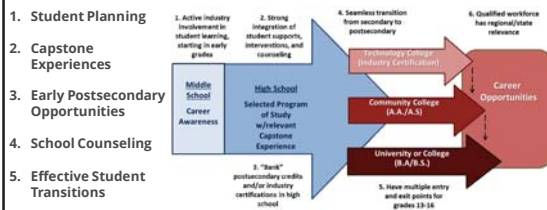
## CURRENT TN ASSESSMENT LANDSCAPE

- **Grade 2 (optional)**
  - ELA and Math
- **Grades 3-11**
  - Math
    - Math 3-8
    - Algebra I, Geometry, Algebra II
    - Integrated Math I, II, III
  - ELA
    - ELA 3-8
    - English I, II and III
      - Writing incorporated in TNReady
- **Grades 3-11 (continued)**
  - Science
    - Science 3-8
    - Biology, Chemistry
  - Social Studies
    - Social Studies 3-8
    - US History
- **Alternate Assessments**
  - MSAA (ELA and math)
  - ACCESS for ELs
  - Science and Social Studies

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## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student



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June



## COMMUNITY STAKEHOLDER

### Challenges to Career Exploration

- Just scratching the surface
- Old stereotypes about CTE from Guidance & Parents

### Recommendations

- Career exploration components beginning in elementary school that are measured
- Required career exploration/high school 101 class for middle school students tied to CTE pathways
- Training for K-12 counselors around CTE pathways

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## COMMUNITY STAKEHOLDER, CONT'D

### Challenges to Work-Based Learning

- Scale & Scope
- Finding pathway relevant work sites
- Changing the mindset that under 18 are not employable

### Recommendations

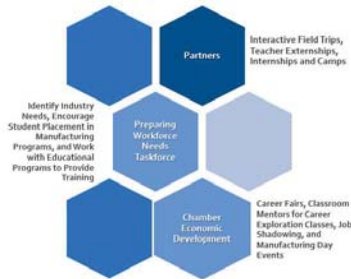
- State level incentives for employers to hire under 18
- Model Georgia's Great Promise Partnership

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## DISTRICT STAKEHOLDER

### Challenges to Program Development

Misconceptions of Advanced Manufacturing: Dinky Dark Environments with Low Skill, Low-Wage Positions  
College for All: Means 4-Year University  
Advanced Manufacturing is "Off Limits" to Students Under 18



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## DISTRICT STAKEHOLDER, CONT'D

### Moving Forward Recommendations for Consideration

To be successful and to create a college and career ready state the same emphasis must be placed on career counseling and development, and work related experiences as we place on college planning, testing, and core academic graduation requirements.




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## REGIONAL STAKEHOLDER

### Recommendations and Considerations

- Articulation Agreements from TCATs to Community Colleges to the University
- Dual Enrollment Issues – fully fund 4 courses
- Program Limitations
  - Secondary: Funding for equipment, staffing, Student Demand vs. Capacity
  - Postsecondary: Progression of students
- Remove Postsecondary Territorial Issues and Competition
- Gaining Parent and Student Support/Interest
- Encourage Regional Collaborations and Partnerships
- Provide Launch Funding for Regional Intermediary/Convener to drive and sustain secondary-postsecondary-industry regional collaboratives
- Establish accountability measures that reflect progressive student readiness

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## Toward a data strategy for college and career readiness

Jason Parker | Division of CCTE | July 27, 2016

### Definition of CCR, version 1

- Tennessee students will leave K-12 education with the knowledge, skills, mindset, and abilities to be positive members of society. This includes being able to achieve fundamental tasks, such as continuing their learning pathway, successfully holding a job, participating in our democratic process, making healthy decisions for themselves and their families, and advocating for their personal values and beliefs.
- In order to be able to achieve these outcomes, students must possess proven academic and technical knowledge and skills, as well as employability skills, that can be exhibited successfully and ongoing. With such, students are aware of their current and projected career opportunities and can pursue these opportunities with confidence.

TN Department of Education2

### Directed learning pathways

Connect students' interests and aspirations with concrete education/career opportunities

Career exploration	Comprehensive school counseling
Goal setting and planning	School culture promoting readiness and "the whole child"
Purposeful course taking	Meaningful community and business engagement
Extracurricular activities	
Early postsecondary opportunities	
Capstone experiences	

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### What does a data strategy for CCR need to do?

- Show us whether the education system is offering coherent, meaningful pathways for students to pursue
- Provide information about students' progress in exploring options, selecting pathways that meet their goals, and pursuing those pathways effectively

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### Key priorities

- Students and parents need a robust view of education and career opportunities in their community, in their region, and across the state.
- Schools and LEAs need access to timely information about their students' postsecondary and employment outcomes.
- TDOE needs to lead with an outcomes-driven approach to data, rather than solely focusing on compliance.

TN Department of Education5

### Quick vocabulary lesson

- **Data** are raw observations or measurements of an object, phenomenon, or event
- **Information** is derived from a collection of data points and helps us understand some aspect of the measured object, phenomenon, or event
- **Insight** is the result of analyzing information that leads us to action
- For us, the gold standard for analytic purposes is **student-level observation data**. We can build to all other levels of aggregation through this level of granularity.

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## What TDOE knows about the K-12 trajectory

Academic and technical achievement	Social/Emotional	College/Career Readiness
<ul style="list-style-type: none"> <li>• Course enrollment + grades</li> <li>• Credit attainment</li> <li>• TN end-of-course assessments</li> <li>• ACT</li> <li>• EPSO enrollment</li> <li>• CTE concentration</li> </ul>	<ul style="list-style-type: none"> <li>• Attendance</li> <li>• Discipline (major)</li> </ul>	<ul style="list-style-type: none"> <li>• WBL capstone enrollment</li> </ul>

TN Department of Education 7


## Opportunities to learn more

Academic and technical achievement	Social/Emotional	College/Career Readiness
<ul style="list-style-type: none"> <li>• EPSO credit articulation</li> <li>• Local assessment initiatives</li> <li>• More granular and direct views of skill and competency attainment</li> </ul>	<ul style="list-style-type: none"> <li>• Tardiness</li> <li>• Discipline (minor)</li> <li>• Positive habits, skills, and traits</li> </ul>	<ul style="list-style-type: none"> <li>• WBL capstone assessment and quality of placement</li> <li>• Career exploration in early grades</li> <li>• Industry certifications</li> </ul>

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## Opportunity: Secondary education plan

- Students are required to have a secondary education plan by end of 8<sup>th</sup> grade
- Plan could be a key advisement tool for student throughout high school
- Each student's plan could be a personalized measure for success → "Am I on track to meet my goals?"
- At the state level, we do not receive/maintain any data related to this plan



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## Beyond high school

- Since postsecondary attainment and meaningful employment are our shared goals, schools and LEAs need access to timely information about their students' postsecondary and employment outcomes
- Inter-agency data sharing is the best solution

TN Department of Education 10

## Opportunities: Path to postsecondary




TN Department of Education 11

## Tennessee Longitudinal Data System (TLDS)

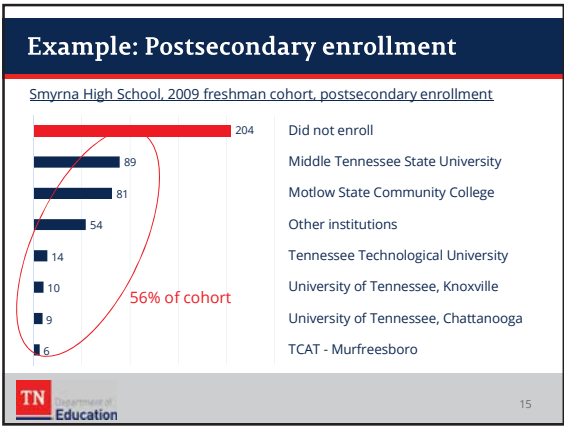
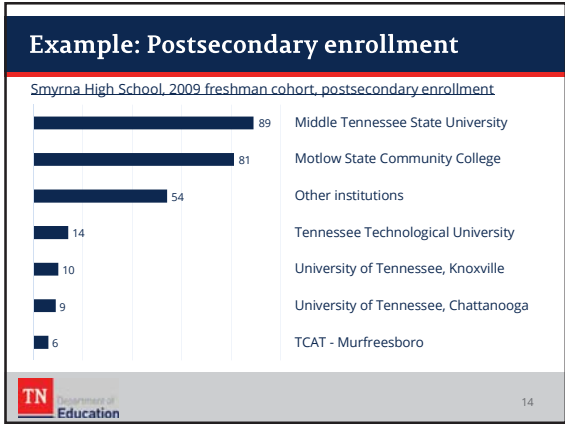
- Interagency data system that provides a view of students' trajectory from childhood to the workforce.
- Partnership between multiple agencies:
  - TDOE
  - TN Higher Education Commission
  - TN Department of Labor and Workforce Development
  - TN Department of Children's Services
- Matching algorithms link records from different data sets to give a long-term view of an individual's path

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### Postsecondary data availability via TLDS

Milestones	2009 cohort	2010 cohort	2011 cohort
High school graduation	✓	✓	✓
Postsecondary initial enrollment	✓	✓	Summer 2016
Postsecondary persistence into Year 2	✓	Summer 2016	Summer 2017
Postsecondary attainment, four years	Fall 2017	Fall 2018	Fall 2019
Postsecondary attainment, six years	Fall 2019	Fall 2020	Fall 2021

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- ### Opportunities for improved data flow
- Timeliness → Approx. six months between end of semester and availability of postsecondary semester file in TLDS
  - TDOE is working with partner agencies to learn how to use economic and workforce data appropriately
  - Challenges in matching data sets, especially for students who move directly from high school into the workforce
  - Data quality
    - For research into broad trends, we anticipate noise in the data and can use statistical methods to correct
    - For individual-focused action, the data have to be accurate at the record level
- TN Department of Education 16

### Interagency data sharing is key

- Connecting K-12 education to higher education and workforce development is a collaborative venture
- Interagency data sharing enables a robust view of the education-to-workforce pathways in our state
- Requires collaboration across agencies to understand the data and tell meaningful stories

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## Career Forward Task Force Meeting Notes

Meeting: Wednesday, July 27

### Welcome Dr. McQueen, Commissioner Tennessee Department of Education

- Review of the charge:
  - Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
  - Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.
- We have an opportunity through ESSA as a state to begin elements of this charge.
- Review of the guiding questions:
  - Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
  - Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.
- As you think about your work and the students you interact with, how did you know when your work career ready? Often you didn't know, you went in and hoped to be career ready. The commissioner worked at the radio station and did the news and had an internship beforehand. The feedback she was given beforehand helped her to know if she was ready for the job. Although she had a sense of career readiness she wasn't on a pathway. How can we help students to know their own career readiness and be on a pathway to help them prepare.
- We will be hearing about ESSA and be discussing definitions and recommendations. The final task force meeting will include a complete draft.

### Every Student Succeeds Act (ESSA)

- ESSA was passed in December and is a new no child left behind. Tennessee Lamar Alexander had been leading the work on bringing those together. Now we have the opportunity to give feedback on ESSA.
- ESSA does not mean states can do whatever they want. There are a variety of programs that are mandated under federal law, but there are opportunities to take advantage of flexibility. ESSA requires stakeholder engagement to take part in making the plan.
- ESSA state plan goal is to develop a Tennessee-specific ESSA state plan, aligned with the department's strategic plan and informed by meaningful consultation with stakeholder groups.
- We are in the stakeholder input part of the ESSA plan. We are asking about the plan and to provide feedback and improvement. We hope to have a written plan this fall and then approve the plan in February/march.

- There are six working groups (accountability, standards and assessments, English learners, educator support and effectiveness, student support, and school improvement).
  - The working groups are a variety of stakeholder groups.
  - All feedback from other groups is given to working groups to digest and think about.
- Please use the feedback form to answer 13 questions.
- Questions about opportunities for input?
  - Website will be open through the first of September
  - Online we have received close to 200 comments
  - ACTION ITEM: We will send you the link, please send it to your constituents
  - We are meeting with all of the school boards in September
  - Industry membership is on working groups and Nashville Chamber. SCORE is collaborating with English learners and holding a meeting for industry members.
  - Are there other groups we should be meeting with? Please let us know if you do.
- ESSA is an opportunity for us to look at TN Succeeds and take it into plan form to fully meet the goals and expectations we have. It's an opportunity to be TN specific. We are not starting from scratch we already have a plan.
- Comparing ESSA requirements to TN
  - Accountability
    - We have a new accountability system. There are three pathways to show achievement and gap closure. Gap closure is a priority but we want all groups to improve. Economically disadvantaged and minority students gap is improving, but the opposite has been happening with ELLs and students with disabilities. We now acknowledge growth between proficiency levels.
    - ACT is now part of accountability. ACT is a high school graduation component now under state board policy. Directors of Schools lead this work.
    - If a district fails to meet 95 percent participation rate they become in need of improvement.
    - We are doing what ESSA requires. Measuring school quality and success is new. We have test scores in math and ELA, graduation rate, graduation rate, value added, and ACT. Now we have the opportunity to expand outside of test scores.
    - Tennessee has had a theory of action that is based on district. We now need to have a school accountability plan. We will be writing a school accountability model. This matches the legislature passing the A-F grading systems. There will need to be one summative score. We will need to have performance metric about school quality and student success.
  - School Quality and Student Success
    - District accountability metric and school metrics could be different, but feedback has shown we want them to be as close as possible. They may have to vary in size in terms of number of students.
    - Guiding principles on coming up with the indicator: align to our vision, promote college and career readiness, provide actionable feedback, reward

excellence, identify equity issues, provide additional pathways for districts to demonstrate success, minimize unintended consequences, comply with state and federal law.

- This is our opportunity to show what we as a state prioritize and believe.
  - All metrics must have data.
  - Possible metrics
    - **Chronic absenteeism**, discipline data, social and emotional learning surveys, EPSOs, or access to effective teachers.
    - **EPSO** limitations are availability challenges such as equitable opportunities, and are there certain programs that provide more opportunities.
    - We could limit the challenges by weighting the courses.
    - **Discipline data**- it fluctuates too much, also could be weighted. We could look at in school discipline gaps such as disproportionate representation in minorities.
    - Question: What is the department trying to incentivize? We want to say more students out of class is negative for students. We want to leave out dictating a schools discipline plan for schools. We want to make sure there is equity in suspensions.
    - 24 percent of students in the state are minorities but 80 percent of suspensions
    - Study from UPenn found that Tennessee expelled more African American students than any other state.
    - Question: Why is that?
      - The report does not answer it. That is up to districts to look at.
    - These metrics could be in accountability or they could be transparency metrics.
    - ACTION ITEM: We can share the data on discipline.
    - Our goal is to make sure we are highlighting things that are important to us.
    - **Access to effective teachers** is another possible metric to look at.
    - Question: Would this look at teachers outside of their license area?
      - We are looking at that but this is slightly separate.
    - Effectiveness based on value added. Observation scores tend to be inflated and there is not a lot of spread.
  - We are hoping to integrate an index of opportunity to create a more holistic measure.
  - As we are talking let's make sure we are thinking about unintended consequences as we don't want that. The opportunity index is something that all the feedback groups have given positive feedback on.
- Small Group Discussions

- What is being presented is a set of outcomes, what I don't see is the process? What are the processes that are involved in advantageous outcomes? That may not be easy to quantify, but is something to think about.
  - Inherently in an accountability model your metrics are outcomes but they all connect back to for what you should be doing to lead to improvement. We know students who are chronically absent in kindergarten are not on a pathway to read proficiently and graduate. We need to think about conversations with the communities. This is why some people have asked for transparency measures for a few years to talk about how to improve it.
  - This is a great start. Performance of different subgroups in the measures should be considered. Access to effective teachers, what do we do about teachers who do not have value added? Have you considered college going rates for postsecondary? It is lagging data.
    - College going rates is not enough we care about persistence and is so lagged it goes against actionable data.
    - Value added is a limitation as it is limited to certain content areas and teachers.
    - Subgroups- ESSA requires the disaggregation by subgroup. Any metric would have to be disaggregated for reporting but we are deciding if it would be in accountability.
  - Should we be looking at remediation?
  - Accountability versus transparency is important. Good idea to have a runway with transparency first. These metrics make sense. Teacher effectiveness and teacher quality but we haven't said anything about leader effectiveness and leader quality. Leaders are the levers.
    - Climate survey does get at leadership. There are surveys that have been validated that would include the leadership component. There is pushback on surveys. But it does tell you something where there is an absence of data. Pros leadership component is inherent and you can dig in and get data on discrete components. Cons folks believe you can game a survey.
    - The whole point is to create data that is useable.
    - Some districts already use surveys.
    - Survey participation is sometimes a challenge. We also agree that there are measures of leadership quality.
    - Can we talk about program effectiveness, for example CTE concentrators? Can we audit high school transcripts to ensue students are taking the courses someone says they are taking. We are doing a study right now, and there is some discrepancy across the state.
      - Course enrollment information hard to generalize from especially as some of the challenge is reporting. We could



decide that CTE concentrators is an area we want to focus on. As an issue we are taking it up, but not necessarily something in accountability.

- Lagged data is a challenge but doesn't mean it should be moved off the table. For example college perseverance doesn't have to be in accountability but could be a five year model to depict how schools are growing. Good to think about with transparency metrics. Right now we have the opportunities under TNPromise and Drive to 55, and K-12 is the most important place to set the state up for success. College access is important and now we are going to monitor it and match our accountability model to it.
  - ACT requirement in reference to graduation. It passed first reading at the board. Now you can't argue not taking the ACT. It was already in law and now is in policy. It can be ACT or SAT.
  - College going is the result of a successful high school graduation and then the burden falls onto the postsecondary. TBR is going to remediation model and retention has increased fivefold. The college and university needs to take some responsibility. We also need to think about placement as a metric. Some students have certifications when they graduate so where they place in community college matters, we also have the labor data. Placement you would want to match with a pathways.
    - Placement is too broad as some placement is in fast food. We also want to see a meaningful next step. Data suggests that remediation coursework does not help all demographic groups evenly. We need to provide ancillary supports. We would have to look at different measures such as first generation students and loan rates. Co-requisite is helping but we don't necessarily have that model in four year institutions.
    - K-12 now has SAILS which is making a difference. Tracking students is going to be very important.
  - Explore is used with world of work. Have there been suggestions about using a career interest inventories?
    - We should be thinking about our recommendations from this task force. ESSA provides integration with academic and technical skills. We want to be thinking about what is the whole story, students need to be aware of why.
  - This conversation is not ending here, we want to bring this back to you with some research.
- Career Forward Key Takeaways

- **March:** Where is Tennessee? Where are things happening nationally that we should be looking at?
  - We looked at the mismatch in readiness, and what does that mean for the end product, our student.
  - By 2020 we are not projected to reach the national average of job to postsecondary attainment. We need to hit 55 percent and move past.
  - Getting a job does not necessarily mean a living wage.
  - Bob Schultz spoke about the key levers to student pathways. Be thinking about these levers in small group.
  - Maura from IBM and the P-Tech model. Early college as a more directed approach.
- **April:** We began to think through some takeaway questions: (1) predictors, (2) outcomes, (3) early college, (4) school counselors, (5) authentic experiences.
  - We began to look at Drive to 55 data and the disruption index. The disruption index will occur due to technology. We need to think through how we are preparing our current and future employees.
  - Started a conversation on work-based learning and the importance of quality.
  - Steve Voytek to talk about ESSA, WIOA, and Perkins and provide a landscape. There is a running theme in the acts and it is important to think through an integrated model.
    - Well-rounded education is a term that is new within ESSA, it's important to think about the whole student. All the acts are coming together to say it is not enough to just have high school diploma.
- **May:** Takeaways from previous sessions.
  - Jonathon Attridge talking about the lifecycle of a student. There are certain moments of time where you can look to see how students are progressing. The majority of Tennessee students are not reaching the third grade proficiency. All these leverage points should be viewed as opportunities. Eighth grade math determines a student's trajectory of math courses and EPSO hours. Ninth grade course success is highly predictive of high school and postsecondary attainment. Too few students who are ready take EPSOs. We should be thinking about how to place value on postsecondary in secondary. Are there other points we should be thinking about?
  - We looked at the current TN assessment landscape and the effective K-14/16 student pathway. We at the department believe students should have seamless learning. We need to be thinking about the planning, how do you help students be more informed consumers?
- **June:** Stakeholders spoke about their initiatives. Beth Duffield, Rutherford Chamber of Commerce spoke on the challenges to career exploration and recommendations. Challenges include just scratching the surface and stereotypes about CTE. Recommendations include career exploration in elementary school. Beth also talked

about work-based learning and the importance of incentivizing industry in work-based learning.

- Arlette from Bradley County shared successes and the opportunities. Opportunities include changing perceptions for parents and moving away from four year college for all. Arlette talked about the importance of counseling and advising.
- Lillian Hartgrove from the highlights initiative spoke about their work on regional growth. She spoke about articulation agreements, dual enrollment funding challenges, funding for equipment, ability of staffing to capacity, removing the territorial issues in postsecondary, and gaining parent and student support,.
- This recap was to help with small group thinking.
- In terms of EPSOs there are barriers in terms of access and participation. One of the things we have to address is soft skills and some of the students who already have that are athletes. We are doing students a disservice by having 4<sup>th</sup> block sports when students could be taking EPSOs.

### **Toward a Data Strategy for College and Career Readiness by Jason Parker, IES Grant Coordinator TDOE**

- “Data are good, we need more, let’s share”
- In terms of our data strategy we need to make sure we are thinking about the directed learning pathways and how we are connecting students’ interests and aspirations with concrete education/ career opportunities.
- Data strategy for CCR needs to show us if the education system is providing coherent systems.
- Vocab lesson: Data are raw observations or measures of an object, phenomenon, or event.
  - Information is derived from a collection of data points and helps us understand some aspect of the measured object, phenomenon, or event.
  - Insight leads us to action.
  - The gold standard is student level observation.
- Our TDOE data is based more on academic data compared to social/emotional and college and career readiness. We need to think more about the granular view to get at root causes. We have lots of opportunities to learn more, for example tardiness or positive skills and traits in our students.
  - Discipline we mostly see as “violation of school rules” which is a huge spectrum of events. Getting a view of those elements would help with understanding readiness. These are minor violations.
  - Do we track who has participated in career exploration? Not really, maybe locally.
- Opportunity: Secondary Education Plan
  - Students are required to have a secondary education plan by the end of 8<sup>th</sup> grade and is intended to be a key advisement tool. Each student’s plan could become an individualized measure for success. At the state we do not receive any of this data.

- We should be thinking more about inter agency data sharing.
- College for TN. Org is a way students can gain knowledge and connects to drive to 55.
- Tennessee P20 datasystem (grades preK-20 grade school)
  - Longitudinal data
  - Longterm with a lag
  - Smyrna high school postsecondary enrollment data, thinking about how to share this data with schools. Smyrna only has 6 students going to TCAT- area of growth. 204 did not enroll.
    - Only 2 percent of students go right out of high school to TCAT, huge area for growth.
    - 56 percent of cohort went to postsecondary and matches statewide data. Doesn't leave much wiggle room for drive to 55.
    - Military does count in did not enroll, something we are working on.
- Opportunities for improved data flow
  - There is a six month delay between end of semester and availability of the data in P20
  - We are working on how to communicate with other agencies data.
  - There are opportunities to improve the data flow, if we are talking about students we need to make sure the data is right.
  - Inter-agency data sharing is crucial
- Questions
  - How difficult would it be to get a picture of initial enrollment? We could, it lies with the higher education commission. THEC gets a six week enrollment data, but it's not pushed to P20 as so many students don't finish the semester.
  - Exciting we are talking about the longitudinal data system as a lot of people want the information.
  - We have enough data in place to analyze it and share with districts.
  - Is student not enrolled given to work force development boards? Currently no, but that is a great idea.
  - This is powerful data for communities, as people just don't know. Student saying their plans is vastly different than reality.
  - Tennessee Promise students are persisting at a higher rate than their counterparts who are not TNPromise. We are wondering why. Students may say I am going to college but TN Promise students are already there, they are being coached. There is a huge power to mentorship. Should every high school teacher have a mentor? TNPromise is helping to shape cultures and expectations within schools.
  - Some of this also has to do with the culture. We also need to be thinking about the culture. There are challenges with matching and marrying of data.
  - 204 that did not enroll, at TCATs average age is 26/27 and a huge number of them are coming back from having not done anything out of high school. Reconnect is important.
    - We could see this data in 10 years.



- Educators don't always know about all the opportunities especially TCATs.

Small Group Discussions

Reflection on:

- First draft of ready student
- Guiding Principles
- Reflections

### **Closing by Commissioner McQueen**

Between now and the next meeting you will get drafts on the principals and recommendations. Our goal is to create something actionable that we can then act on immediately.

Senator Norris update on funding. In the budget for the current fiscal year LEAP 2.0. 10 million funding for LEAP including funds for longevity for existing programs, expand reach, and fund employers to compensate students to go into work training. People can now be learning a skill and a wage at the same time. LEAP proposals are due at the end of the week. There is another pool of funds for "capacity" fund programs at TCATs and community colleges expansion and updating.

We look forward to work together to think about the funding that will come out of this task force.

Thank you for your time, it has been an exceptional day!



To: Members of the Career Forward Taskforce

From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education

Date: August 9, 2016

**Subject: Follow-up from meeting on July 27, 2016**

### **Meeting Overview**

The fifth meeting of the Career Forward Task Force was held on July 27, 2016, at the First Amendment Center in Nashville, Tennessee. The primary purposes of the meeting were to (1) share how the department's TN Succeeds Vision fits within the federal Every Student Succeeds Act (ESSA) framework; (2) review salient topics from previous sessions; (3) learn about the available data on student readiness; (4) discuss the draft Ready Student definition; and (5) devise guiding principles and recommendations for the Career Forward Taskforce Report.

Dr. Candice McQueen, commissioner of education, began the meeting by reviewing the taskforce's charge and guiding questions. The sixth and final meeting will include a complete draft of the Career Forward Taskforce Report.

### **TN Succeeds Vision and ESSA Opportunities**

Dr. McQueen provided an overview of ESSA and how the department plans to integrate the act's provisions into the TN Succeeds strategic vision. The federal legislation succeeding No Child Left Behind, ESSA offers states greater flexibility in developing state-specific plans than its predecessor, provided certain federal mandates are met. Dr. McQueen stated that the department is consulting with stakeholder groups to develop a Tennessee-specific ESSA plan that aligns with the *TNSucceeds* vision. To this end, the commissioner requested that taskforce members and their [constituents offer input](#) to better inform the department's ESSA workgroups. The feedback form will accept responses through Thursday, September 1.

Focusing on accountability, Dr. McQueen discussed where Tennessee stands in comparison to ESSA requirements. Tennessee's new accountability system measuring district-level achievement and gap closure in test scores, graduation rates, and ACT scores already meets much of ESSA's provisions. However, ESSA requires the department to also develop a school-level accountability plan. The department will use this opportunity to devise a single, summative school quality and success metric that looks beyond traditional test score achievement.

Dr. McQueen stated that developing this school quality and success metric will serve as Tennessee's opportunity to demonstrate what the state prioritizes and believes in within education. The department has identified a number of guiding principles to shape the process, namely that the district and school-level quality and success metric should align to the TN Succeeds vision, promote college and career readiness, provide actionable feedback, reward excellence, identify equity issues, provide additional pathways to demonstrate success, minimize unintended consequences, and comply with state and federal law. Possible components to include this metric include chronic absenteeism, early postsecondary opportunities, school discipline, and access to effective teachers. Taskforce members discussed these indicators and suggested additional measurements, such as



school leadership, college persistence, and career placement. Jason Parker, IES grant coordinator for the department of education, offered to report back on these suggestions, noting that even if data or methodology limitations prevent inclusion in the quality and success metric, the department can publish separate indicators as part of its larger transparency report.

### **Review of Previous Sessions**

Dr. Danielle Mezera, assistant commissioner of education, reviewed the taskforce's activities thus far to prepare members for the small group session. Complete notes are available in memoranda from previous taskforce meetings.

### **Towards a College and Career Readiness Data Strategy**

Jason Parker, IES grant coordinator, provided an overview of the department's ongoing college and career readiness data strategy. Mr. Parker described how the strategy aims to gauge readiness from a holistic perspective, but noted that extracting meaningful and actionable insights require data to be more available and more refined. Within discipline data, for example, "violation of school rules" encompasses a broad range of minor violations that could reveal behavioral issues impacting readiness. However, Mr. Parker did note a number of opportunities for the state to better collect and collaborate on existing information. For example, a system gathering the secondary education plans that eighth graders complete could allow the state to develop an individualized measure for postsecondary success. Similarly, the Tennessee P-20 data system offers longitudinal postsecondary enrollment data that could better inform schools and districts on successful or underutilized pipelines.

### **Small Group Work: Defining a Ready Student**

Small groups discussed initial and revised draft definitions for the Ready Student. Complete notes will be provided in a supplemental document.

### **Small Group Work: Guiding Principles and Recommendations**

In small group, the taskforce put their guiding principles and recommendations for student readiness to writing. Participants reflected on their beliefs around integrated learning pathways, early postsecondary, career exposure, and postsecondary and career readiness. Complete notes will be provided in a supplemental document.

### **Closing**

Dr. McQueen concluded the session with logistics and a preview of the final meeting. To ensure efficient discussion, members will receive a draft of the taskforce's guiding principles and recommendations before the next meeting.

### **Next Meeting Information**

We will meet again Thursday, August 24 at the First Amendment Center to review the draft report



and continue our discussion on postsecondary and career readiness. We look forward to your feedback.

Thank you for your participation in the July meeting of the Career Forward Task Force. Please feel free to contact [Melissa.Canney@tn.gov](mailto:Melissa.Canney@tn.gov) with any questions you may have.

### **Contact Information**

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# August Meeting Materials

## Career Forward Task Force

### Agenda

August 24, 2016

*Light Breakfast - (Optional) starting at 8:10 a.m.*

- |       |   |            |
|-------|---|------------|
| I.    | <i>Overview of Today</i><br>Dr. Candice McQueen<br>TN Commissioner of Education   | 8:30 a.m.  |
| II.   | <i>Review of Definition, Guiding Principles and Recommendations</i><br>Dr. Danielle Mezera<br>TN Department of Education  | 8:35 a.m.  |
| III.  | Break: Transition to Small Group  | 9:00 a.m.  |
| IV.   | <i>Small Group Discussion: Review of Def, GP &amp; Recs</i>   | 9:10 a.m.  |
| V.    | Break: Transition to Large Group  | 10:30 a.m. |
| VI.   | <i>Large Group Discussion</i><br>Facilitator: Commissioner McQueen  | 10:40 a.m. |
| VII.  | <i>A Ready Student: Going Forward</i><br>Panel: Commissioner McQueen, TDOE<br>Commissioner Burns Phillips, TN-DL&WD<br>Interim Chancellor David Gregory, TBR<br>Exec Dir. Mike Krause, THEC<br>COO, Ted Townsend, TDECD<br>Facilitator: Danielle Mezera | 11:00 a.m. |
| VIII. | <i>Lunch Break</i>  | 12:00 p.m. |
| IX.   | <i>Bringing It Home: Salient Points</i><br>Facilitator: Danielle Mezera   | 12:20 p.m. |
| X.    | <i>Next Steps and Dismissal</i><br>Commissioner McQueen   | 12:50 p.m. |

## Career Forward Taskforce Notes

Meeting: August 24, 2016

### Welcome from Dr. Candice McQueen, Commissioner of Education

- We have all elements of the guiding principles in draft form today for the task force to review.
- Today we should be thinking about where things resonate and where we place priority on the recommendations, letting the guiding questions frame our work.
- Our panel today will feature conversations with some major stakeholders who will be involved in the work going forward.

### Overview of Guiding Principles and Recommendations by Dr. Danielle Mezera

- **Ready Student Definition:** We want this to serve a guiding source of what our state should strive for. The definition as written extends beyond K-12, recognizing the value of postsecondary attainment and the importance of employability/soft skills.
- **Guiding Principles:** Nine areas of focus in the guiding principles: integrated learning pathways, employability (soft) skills attainment, early postsecondary, career exposure, seamless secondary-postsecondary transition, postsecondary credential attainment, counseling/advising, postsecondary and career readiness measures, and graduation requirements.
- **Recommendations:** See attached handout for review.
  - Questions/comments:
    - “General assembly” language should be changed to say “General Assembly and the Governor.”
    - (#27 – funding for counseling) BEP review committee has prioritized this, along with reconsidering technology expenditures.
    - (#8 – career planning inventory) Is the 10<sup>th</sup> grade too late?
      - The grades are suggestions as we know most students start programs of study in their junior year, but the goal of the recommendation is to prioritize those active conversations between students and advisors to craft their plans.
    - (#11- capstone requirement) Would these requirements be waived?
      - We want to move students to the point where they are all meeting the requirements, but there is a concern on requiring it for graduation. Adding a research pathway as a capstone option could help.
    - (#14—early postsecondary requirement) Add a note indicating which courses this includes.
    - (#26 – counselor training) This would be a conversation the counselor would have with their principal or district leader.

- There may be some recommendations that need more analysis before we put in place before making an official recommendation.

### Small Group Discussions

- Groups discussed the draft definition, guiding principles, and recommendations before reconvening as a large group.

### Large Group Reflection on Guiding Principles and Recommendations

- Planning piece is very important and the counseling.
  - Strong articulation of what counselors.
  - Topic to bring clarity and alignment
  - Small groups on defining counseling and its role.
- (#4- early college models) Pellissippi State is doing great things with their early college model.
  - Half a dozen schools within the Board of Regents' purview already have middle colleges, but there are some significant barriers. Needs to be a recommendation for further analysis.
  - We already took away the negative incentive to graduating early.
- DC/ DE enrollment needs to have more continuity across the state.
- ESSA explicitly parts and accountability, could we foreground some of the requirements that will already happen with ESSA.
- We will send a final draft in the next few weeks and the final by September.

### Going Forward: A Ready Student Panel Discussion

Dr. Candice McQueen, commissioner, Tennessee Department of Education

Burns Phillips, commissioner, Tennessee Department of Labor and Workforce Development

Dr. David Gregory, interim chancellor, Tennessee Board of Regents

Mike Krause, executive director, Tennessee Higher Education Commission

Ted Townsend, chief operating officer, Tennessee Department of Economic and Community Development

Dr. Danielle Mezera, assistant commissioner of college, career, and technical education, Tennessee Department of Education (Facilitator)

- *Educational choices and career choices are not mutually exclusive, but often treated as such. Why do you believe that has been the case?*
  - **Phillips:** Lack of awareness between education and business. Lack of awareness of the overlap in skills. Lack of awareness in what is needed in education, although that is changing every day.
  - **Krause:** We are evolving and reconsidering the purpose of higher education. Higher Ed has been reacting to business needs overall, and Tennessee is moving more quickly compared to other states.

- **Gregory:** Part of that is the discussion is straddling the theoretical and the applied. For instance, in our own community college system we used to have six institutes that have since transitioned into community colleges.
  - **McQueen:** In K-12 we have historically not done a good job of saying why you are learning the content and how it is connected to something larger. For instance, is teaching a liberal arts-based or professional skill-based career? It's not an either/or matter it's both. Even in the STEM fields you need to be talking to younger students about the type of careers that what they are learning can lead to.
  - **Townsend:** This disconnect has been fundamental and traditional. Careers are seen as a long distance destination. It's hard for students to see that what they are doing is preparing them for life. We want pathways to be declarative and easy to understand. Engaging industry and articulating agreements are very important. We have a responsibility to continue this effort to make sure industry is engaged and that Tennessee is a destination of choice that also provides opportunities for its own. We are setting higher standards and demanding more performance. That disconnect is going away, and we will soon have engagement and involvement as the connective tissue going forward.
  - **Burns:** Everyone points the finger at education, but we have started a new initiative on consultative work force development. We work with employers to assess the health of their work force. A lot of businesses do not have a handle on their own work force as they are demanding things that they don't really need. Business also need to understand what they are really lacking. It's not always education, either; sometimes business misses the mark as well.
  - **Mezera:** Disruption is a good term to think about going forward. How can we disrupt the silos that separate career and education pathways?
- *How can business be involved to ensure K-12 graduates are prepared for the workforce?*
    - **Gregory:** This is the greatest challenge to make sure we are talking to each other. The skills panel in Middle Tennessee has heightened that notion. Education and business and industry need to talk to each other in a common language about what they need. We need to have the right kind of people at the table. We need business at the table who will be writing the positions and on the education who are writing curriculum. Meeting people at the right level is important. Sustainability is key. Sustainability discussion around education and workforce needs is important. We just finished another skills panel in Nashville, and are trying to figure out how to institutionalize it so that people don't look at this as a temporary opportunity.
    - **Townsend:** Supply and demand. With respect to ECD, since 2011 we've announced over 123,000 net new jobs to Tennessee's economy backed by \$23 million in capital investment. That has put pressure on this system. It's risk capital, especially in the human capital element. After all, over one million workers will be effected by automation. Yet we still see that industry has a high appreciation for Tennessee's workforce and the state's investment in it. Announcing the jobs is great, but we need

the skilled Tennesseans to fill them. Unemployment is decreasing, but it is not distributed equally across the state. We have to meet what industry is asking for and they need to clearly state their needs. When people are employed they are providing for their families. If we meet the drive to 55 we are producing vast increases in the numbers of employed Tennesseans, and the additional income received would mean \$746 million more in state revenues.

- **McQueen:** How do we create a variety of pathways for students to be successful? Previously we have sent a uniform message to the detriment of students. We need to use data to drive those decisions. It takes the local communities understanding the need. We need to know what is coming and be responsive to that 5-10 years out. That is complex and challenging but not undoable. We can do it with better conversations and better data. We have to be intentional.
  - **Phillips:** I agree, sustainable and intentional. Business has successfully reached out to education in some areas. In Jackson, 23 businesses came together to counteract Toyota hiring away advanced manufacturing technicians. The businesses wrote a curriculum for Jackson state and provided tools, and are now extending the program into about a dozen high schools. Other companies should consider this model of banding together to become self-sustaining.
  - **Mezera:** The shared language piece is essential and is a common theme we hear. Sustainability is also important; there is a belief that “this too shall pass” so countering that will be an ongoing issue. We need to break down barriers and seize opportunities. On a visit with Hamilton County an employer said they wanted a greater touch point with school, but the school wanted them to supply uniforms for the soccer team rather than discuss curriculum.
- *We have a lot of recommendations promoting seamless secondary-to-postsecondary transitions. With this belief that the two systems must work together, how can we support that?*
    - **Krause:** It's great that we aren't building from nothing. PC967 is helping. SDC is still mostly high achieving students. Only 4 percent taking full four course but with change in legislation more students are taking but to just one course. Building in default DE pathway is a good step to ensuring students are taking it. A lot of students who do take it are the go getters.
    - **Gregory:** In higher education we measure everything. We don't measure DE as well as we should. For first time college students there is still a fear of college and getting the confidence in high school is huge. Mentorship is very important in the TN Promise program. The idea that we are all here together and talking is important, we need to stay linked. We have to sustain those discussions and show the alignment is an easy seamless approach for our students.
    - **McQueen:** We have to hold to high expectations in K-12, we have to keep talking about our standards and keeping to our standards. We have a lot of room to grow in expectations and standards but we are not seeing the growth. ACT results came out today 1300 more eligible for HOPE. 21 average nationally to a 20.8. More TN

students took it than ever before and held firm with 19.4. In the subtest scores on average only around 20 percent of our kids are showing that they are postsecondary ready. We have high aspiration, TN promise, drive to 55 but we still have kids who are not ready to seamlessly translations. Setting high expectations and the hard work at the local level is extraordinarily important. We cannot become weary of this conversations. WE need to ensure strong professional learning, teacher prep programs. In October TNReady scores are going to be low, people will say it's too hard but that's not a reason to back to. Growth will happen and we will start closing that gap. We will have more students ready. Students have to read deeply, have to have technology skills.

- *Statewide work achieves so much but, where it matters most is at the local and regional levels. How do you get past any disconnects and see this work through to local communities and regions? What would you like to see going forward?*
  - **Townsend:** We often bridge that gap in state and local level. The transactions cannot be decoupled from the local level so it requires local involvement. For example, we've built in incentives to the three-star county program. Those seeking that designation are required to include an activity plan focused on education and workforce development. Companies like seeing this as they want to know they are getting involved in an engaged community. They want the people who they relocate to Tennessee to have the right educational opportunities for their families. When we have mayors and alderman engaged, that makes a huge difference. If a mayor can talk about graduation rate with pride, that can be the tipping point.
  - **McQueen:** Leadership matters. Superintendents saying "I know that this is what my students need to be successful" impacts what happens throughout the district. Leadership matters at all levels.
  - **Gregory:** TCAT's have had business and industry councils for decade. They meet consistently. They are connected to the local business and industry. In Putnam County for example, we asked the Chamber of Commerce whether we were meeting their needs. Commerce said we were, they had read our report. Two things we consistently hear back as challenges are drug abuse and soft skill attainment. These challenges cut across all areas of the state.
  - **Krause:** We look for local cooperation and leadership when we need to ask them to do something. For example, Senator Norris the father of the LEAP program. It makes people do something to drive action. Come up with a project and do it.
  - **Phillips:** The Jackson initiative I mentioned prior is an example of something working well at the local level.
  - **Mezera:** The issue building a culture of expectation by setting the structures to produce active communications. Expectation of coming to the table with something is important. If a business wants someone to come with the soft skills they need to be part of the discussion of the development of the soft skills by participating in work-based learning. Be a two way street.

- *Looking forward, how do you envision your agency's work in developing ready workforce?*
  - **Phillips:** We are responsible for WIOA. We are trying to engage in being a facilitators for businesses to figure out what they need and develop a plan to be self- sustaining. Technology changes are playing a major factor as they require agility and a culture of lifetime learning. Technology may remove some jobs, but it also produces jobs. We want to drive that pipeline down to students. After all, things are going to change rapidly.
  - **Krause:** THEC's core vision is to focus on the number of Tennesseans with a college degree. Collaboration with K-12 is key to that work, particularly in getting involved in teacher preparation. For Advise TN, the role is to help students go to college. Our job is to make sure we are all rowing in the same direction. Our job is to make sure we will make the drive to 55, we can't afford not to.
  - **Gregory:** 43,202 is the number of degrees we will be producing in 2025. To get there, TBR has to reach a segment of students that have not historically thought higher education is in their future. The more linkages we can have, the better.
  - **McQueen:** We have to reach drive to 55 and reach the three goals in TN succeeds: ranking in the top half of states on NAEP by 2019, attaining a statewide average ACT composite of 21 by 2020, and seeing the majority of graduates from the class of 2020 earn a postsecondary certificate, diploma, or degree. K-12 is not the end goal, it's the beginning of setting you up for success in the next level. We should also consider how we think about character as well, and how do we support our communities.
  - **Townsend:** We will remain passionate about developing diverse and distinct communities that are successful. We see this whole task force as an opportunity to continue to develop the backbone of our strategy driving our work.

### **Large Group Debrief by Dr. Danielle Mezera**

Thinking on the salient points of the past six months, where do you find yourself? Where are you willing to put your stakes in the ground?

- **Dr. Mezera:** This is the work we live and breathe on a daily basis. At our division retreat we did an overview of where we have been. This has been a long journey but we are progressing around base camps to our Everest. We believe in all recommendations as we believe in a holistic view of education. This fits into our priority on why, why does this have relevance for your students and stakeholders. This has given us time to reflect on the why.
- **Debbie Landers:** In my role on the advisory council, we can speak clearer on the heart and goals. We can ask member schools to align to the heart of the matter and reach out on a local level to chambers of commerce.
- **Stacy Kizer:** As a classroom teacher, taking ownership over employability and soft skills attainment. As teachers we like to point the responsibility to someone else, and now I'm reminding myself that I can have a role and share that leadership and role with other teachers in CTE and core subjects. Williamson County has a good relationship with chamber



of commerce, but the meetings are often “warm fuzzy” meetings that don’t yield outcomes. I can go back there and lead a conversation around projects to work on together.

- **Tony Cates:** For too long it seemed like we had given up on kids on saying they weren’t going to college. TN Promise is changing the narrative and the conversations with kids now.
- **Kristina McClure:** In Hamilton we are working to change curriculum to meet new needs, teachers are referencing statistics to prepare students for the workforce. We are trying to find businesses to partner with that will get students excited. As a counselor for first-generation college bound students, I am taking back the information on the variety of different pathways to the students I am mentoring.
- **James King:** TN Promise has been wonderful. At TCATs we struggled to get 18 year olds enrolled. Faculty was nervous about the influx, but 95 percent of kids who started are still enrolled. Enrollment has doubled for this fall with TN Promise. We can commit to continue access to dual enrollment. If we need to take more programs into high schools we will do that. We need to overcome the barriers for students.
- **Susan Farris:** In our county we are no longer talking about college bound or technical bound kids, but owning all of them. I will take this conversation to teachers and advisory council so we can identify the areas where we don’t know enough. We need to find options for all students regardless of their academic achievement.
- **Jeff Frazier:** Help equip our counselors to be successful with workshops and networks, and lead a high school transitions council. Dual enrollment options need get better on the CTE side and drive a regional approach. Can’t avoid our vocation in education, use the church as a resource.
- **Kyle Southern:** Student panel has continued to resonate with me. This is equity work, economic empowerment and enabling choice. SCORE can view this work as an equity work. Use our convening work, policy, research to help bring these recommendations from paper to action but to keep student voice at the center.
- **Nathan James:** SBE has been working to remove old and antiquated language. Work with all the groups he participates on to align and work in the same direction. The separation between K-12 and postsecondary is unacceptable; we need to tear down every barrier.
- **Vicki Kirk:** Need more that 20 percent of students achieving on ACT. I commit my work on the TN state standards offering high expectations and aligning strong instruction.
- **Jade Grieve:** It’s a complex issue and we’ve been debating so much imagine what teachers and students feel. We need to think through how to translate this into change on the ground. Committing to evidence based and sharing research. P-20 data system has huge potential.
- **Tristan Denley:** Happy to see role of TBR in recommendations. Reaffirm commitment to supporting the seamless transitions and supporting initiatives in high schools. Teacher prep programs.
- **Rep. Brooks:** Expanding awareness of the dual credit opportunities as there isn’t a financial limitation, all high schools ought to be using it. Work on dual enrollment to increase the number of students that participate. Working with college of education and the rigor being demanded. Work to fund what is recommended by the governor.

- **Jerry Boyd:** Elevate the voice of the students. Keep the voice on the students. Leverage this knowledge to help the stakeholders in the district who have already begun the work. Focus on the why. Supporting those that are doing the work, including school counselors clarify their focus. Removing barriers and support with the tools.
- **J.D. Faulconer:** When I was a student, all didn't always mean all. Refreshing to see all now does mean all. High school students have the opportunity to do something postsecondary and take CTE and a concentrator. Have to be the advocate for all means all.
- **Sterling VanDerSpuy:** It's about agility. Through our WIA plan we engage education and engage partners at ECD. The school to work act work started much of this. We're considering how to create an agile system that transforms the public education space? Drive to 55 is an asset, and need to think about the pipeline. Economic opportunity needs to be holistic with the community, we need to see the two-generation approach through, and the workforce piece is key to overcoming some of these barriers. We still need to think about the students that don't get TN promise and how to still connect them with employers.
- **Ann Thompson:** ECD is at the table and wants to figure out the how. ECD can help through data and reports and market them so that they are easily understandable and targeted. Focus on business education connection. How can we create strategies to connect businesses to education? Create 10 steps. Create the toolbox to share. Special emphasis should be placed on rural and distressed counties.
- **Eddie Pruett:** Early postsecondary opportunities. Students have access, but need to work on industry certifications. Counselors need to meet with students earlier in their educational careers to have those rigorous discussions. Counselors and principals making a program of study.
- **Laura Moore:** 10,000 paid internship opportunities through the Mayor's office and connections through academies. That is a great partnership opportunity for connections and pathways. Participating in asset mapping through pathways so we can begin postsecondary opportunities before high school. We are P-20 data passionate and want the data.
- **Arlette Robinson:** Excited to have a definition and way to drive the plans. We will work with the team and stakeholders to work on these objectives. For the council for CTE and directors for CTE President, this task force has been the "what and the why" of our work. Hearing labor say these are the areas of need helps us align. I can take this information to CTE directors across the state to drive this work.
- **Rebecca Leech:** Committed to committed quality work place learning capstone experiences. Work on finding new and innovative ways to support student who are falling behind on their career plans.
- **Debby Shedden:** I will be a voice and carry these recommendations back to board of directors and the information. Carry this back to local school board in Hawkins County to work to find opportunities to be successful. Pioneers of the work ethics diploma. Working to increase partnerships for internships. Tennessee is at the forefront of what is happening in education.



- **Missy Blissard:** Thank you for acknowledge the counselor ratio should be lowered. Will go back and discuss dual enrollment but opening it up to more than just the select high achieving students and more conversations on dual credit.

### **Closing from the Commissioner**

We commit to keep the conversation going, particularly along and how we need to be communicating it, simplifying it, and providing access to data. The more we do to think about the individual student and the pathways for each student helps us reach our equity goals. This all boils down to the individual work we do with students. The student councils across the state helped us find and analyze student needs that we may have not listened to otherwise.

We are going to take your feedback and make a draft to get another round of feedback. Thank you for your commitment over the course of these past six months; we will reach out to our sub groups for further analysis. Thank you!



To: Members of the Career Forward Taskforce

From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education

Date: 2016

**Subject: Follow-up from meeting on August 24, 2016**

### **Meeting Overview**

The sixth meeting of the Career Forward Task Force was held on August 24, 2016, at the First Amendment Center in Nashville, Tennessee. The primary purposes of the meeting were to (1) review and discuss the task force's draft Ready Student definition, guiding principles, and recommendations; (2) reflect on how task force members can shape student readiness moving forward.

Dr. Candice McQueen, commissioner of education, began the meeting by framing the upcoming discussions within the context of the taskforce's charge and guiding questions. Dr. McQueen noted that the Department will draw from what resonates in the day's discussions to help prioritize the final set of recommendations.

### **Review of Definition, Guiding Principles, and Recommendations**

Dr. Danielle Mezera, assistant commissioner of college, career, and technical education, led a review of the draft Ready Student definition, guiding principles, and recommendations. Dr. Mezera noted that the definition is intentionally aspirational, as it should serve as a north star for how Tennessee aims to align the K-12, postsecondary, and industry communities towards a common readiness goal. Similarly, the guiding principles should frame and help prioritize the task force's final recommendations. Participants commented on the specificity and comprehensiveness of certain recommendations, and whether initiatives required under Every Student Succeeds Act (ESSA) could help pare down the number of recommendations. Dr. Mezera encouraged these and similar comments to help the Department prioritize and mark recommendations for further revision.

Participants then discussed these documents in small groups before reconvening for a group reflection. Notes from the small groups are provided as supplementary documents.

### **Going Forward: A Ready Student Panel Discussion**

To frame work going forward, Dr. Mezera facilitated a discussion featuring the following panelists: Dr. Candice McQueen, commissioner of education; Burns Phillips, commissioner, Tennessee Department of Labor and Workforce Development; Dr. David Gregory, interim chancellor, Tennessee Board of Regents; Mike Krause, executive director, Tennessee Higher Education Commission; Ted Townsend, chief operating officer, Tennessee Department of Economic and Community Development. Complete notes from the panel are provided in supplementary documents.

Panelists concurred that the business and education communities are only just beginning to recognize and act on the substantial overlaps in skills necessary for postsecondary and workforce success. Regarding how the business community can be involved in ensuring students graduate



prepared for the workforce, panelists suggested that local educators and industry should strive for intentional, sustainable partnerships. Each panelist affirmed that strong local leadership sharing a common language can build pathways around local needs, whether towards postsecondary or workforce opportunities.

### **Bringing it Home: Salient Points**

Dr. Mezera led a final group debrief, challenging each task force member to reflect on the prior six months and state how they or their organization will commit to ensuring that the task force's work continues. Common themes among these statements included committing to securing support from local chambers of commerce and school boards, ensuring that partnerships go beyond surface-level meetings, championing TN Promise and dual enrollment, and embodying "All Means All" to remove distinctions between postsecondary and career-bound students.

### **Closing**

Dr. McQueen closed the meeting by thanking the participants and reminding them that holding their individual commitments mirrors the State's commitment to equity across each individual student. The Department will take the day's comments and apply them to the draft report, which members will receive for an additional feedback opportunity.

### **Contact Information**

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# Appendix

# Appendices

Appendix I: Meeting Agendas and PowerPoints

Appendix II: Meeting Notes and Follow-up Memos

Appendix III: Meeting Handouts and Articles

Appendix IV: Other State Reports

Appendix I:  
Meeting Agendas and  
PowerPoints




## Career Forward Task Force

### Agenda

March 24, 2016

*Light Breakfast - (Optional) starting at 8:15am*

- |       |  |            |
|-------|--|------------|
| I.    | <i>Introductions &amp; Welcome</i><br>Dr. Candice McQueen<br>TN Commissioner of Education  | 8:30 a.m.  |
| II.   | <i>Call to Action: Tennessee's Opportunities</i><br>Dr. Danielle Mezera<br>Assistant Commissioner of Education   | 9:00 a.m.  |
| III.  | <i>Small Group Exercise</i>  | 9:25 a.m.  |
| IV.   | <i>Juxtaposition of Education and Industry</i><br><i>National and Global Perspectives and Models</i><br>Robert (Bob) Schwartz<br>Harvard Graduate School of Education,<br>Pathways to Prosperity Network | 9:45 a.m.  |
| V.    | <i>Break</i>   | 10:30 a.m. |
| VI.   | <i>One Company's Approach to Engaging in Education</i><br>Maura Banta<br>Director, Global Citizenship Initiatives in Education<br>Corporate Citizenship & Corporate Affairs, IBM                         | 10:45 a.m. |
| VII.  | <i>Lunch</i>   | 11:30 a.m. |
| VIII. | <i>One State's Approach to Defining Postsecondary</i><br><i>and Career Readiness: A Fireside Chat</i><br>Maura Banta and Bob Schwartz  | 11:50 a.m. |
| IX.   | <i>Small Group Discussions: Reflections of Salient Points</i>  | 12:30 p.m. |
| X.    | Dismissal  | 1:00 p.m.  |



# Career Forward Task Force

March 24, 2016

## OVERVIEW of AGENDA

- Welcome and Introductions
- Charge and Approach
- Call to Action
- Small Group Exercise
- Education and Industry Presentation
- BREAK
- One Company's Approach Presentation
- LUNCH
- One State's Approach Presentation
- Small Group Discussion & Reflection

TN Department of Education Career Forward Task Force 2

## CHARGE

- Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
- Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.

TN Department of Education Career Forward Task Force 3

## APPROACH

**The Task Force will meet monthly to learn, listen, discuss, and craft recommendations. In doing so, the Task Force will work to answer three guiding questions.**

1. How do we know when a student is "career ready" at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state's economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

TN Department of Education Career Forward Task Force 4

## OUR GOALS

<p><b>1</b></p> <p>Tennessee will continue rapid improvement and rank in the top half of states on the Report Card.</p> <p><b>MEASUREMENT</b> Tennessee will rank in top half of states on 4<sup>th</sup> and 8<sup>th</sup> grade NAEP in 2019.</p>	<p><b>2</b></p> <p>The average ACT score in Tennessee will be a 21, allowing more students to earn HOPE scholarships.</p> <p><b>MEASUREMENT</b> Tennessee will have an average public ACT composite score of 21 by 2020.</p>	<p><b>3</b></p> <p>The majority of Tennessee high school graduates will earn a certificate, diploma, or degree.</p> <p><b>MEASUREMENT</b> The class of 2020 will be on track to achieve 55% postsecondary completion in six years.</p>
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TN Department of Education Career Forward Task Force 5

## OUR PRIORITIES

- Early Foundations & Literacy**  
Building skills in early grades to contribute to future success
- High School & Bridge to Postsecondary**  
Preparing significantly more students for postsecondary completion
- All Means All**  
Providing individualized support and opportunities for all students with a focus on those who are furthest behind
- Educator Support**  
Supporting the preparation and development of an exceptional educator workforce
- District Empowerment**  
Providing districts with the tools and autonomy they need to make the best decisions for students

TN Department of Education Career Forward Task Force 6



## Career Forward Task Force Call to Action

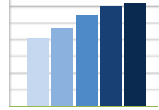


## Our Landscape

### SUCCESSES TO DATE



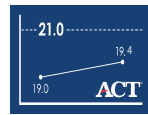
Fastest improving state in the nation on 4<sup>th</sup> and 8<sup>th</sup> grade NAEP



Consistent gains on TCAP every year since new assessments in 2010



Fastest growing graduation rate of any state



ACT statewide average has increased to 19.4



### TENNESSEE'S ACCOLADES

First-ever back-to-back State of the Year winner for economic development 2013 and 2014  
*Business Facilities*

**#4**

State for jobs created through FDI in 2014  
*IBM's Global Location Trends Report*

**#1**

Certified Sites and Shovel-Ready Programs  
*Area Development*

**#1**

Education: Race to the Top Leaders  
*Business Facilities*

**#1**

Overall Infrastructure and Global Access  
*Area Development*

**#1**

Automotive Manufacturing Strength  
*Business Facilities*

**#2**

Best Business Climate  
*Business Facilities*



### TN ECD "TOP 10" INDUSTRIES

- Advanced Manufacturing
- Aerospace & Defense
- Automotive
- Business Services
- Chemicals, Plastics & Rubber
- Energy Technology
- Film, Music & Entertainment
- Food & Agribusiness
- Healthcare & Medical Devices
- Transportation, Distribution & Logistics



## Governor's Workforce Subcabinet

## TYING EDUCATION AND INDUSTRY

### Charge:

The Governor's Workforce Subcabinet will develop, implement, and oversee implementation of a three year strategic plan that fully aligns state resources in an effort to attain the Drive to 55 goal.

### Recommendation:

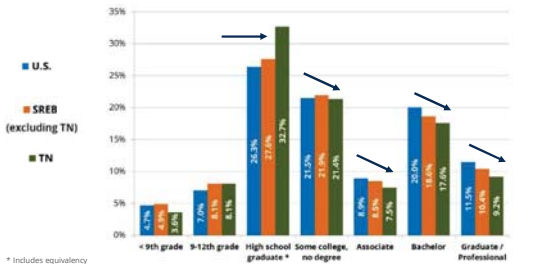
Tennessee will promote a state-specific definition of postsecondary and workforce readiness that is reflective of a collaborative cross-agency approach leading to the development of seamless academic-career pathways to the benefit of its citizenry and industries.



Headwinds...

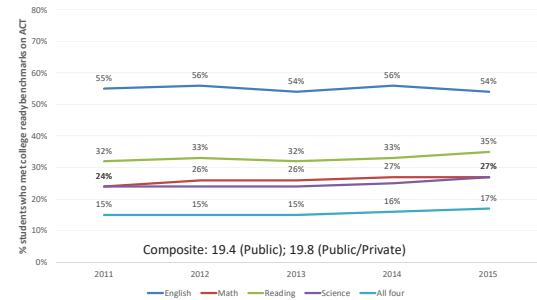
## TRANSITION FROM SECONDARY TO POSTSECONDARY

Educational Attainment of Adult Population (25-64): U.S., SREB States, and Tennessee (2014)



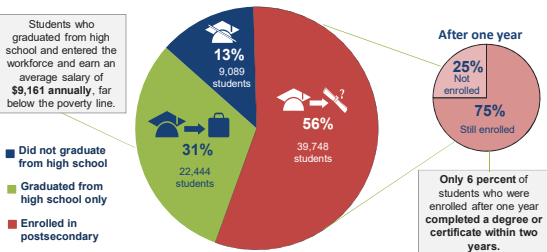
\* Includes equivalency

## IMPROVEMENTS ON THE ACT EXAM HAVE NOT BEEN SIGNIFICANT

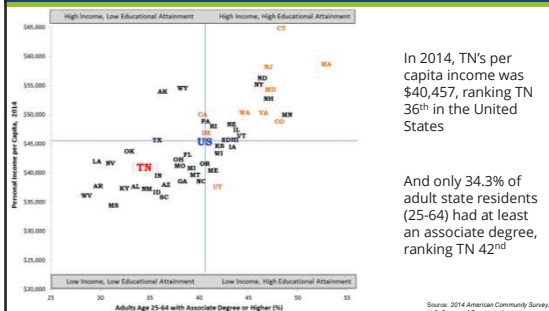


## SUCCESS AFTER GRADUATION

71,403 Students  
2008 Cohort of High School Freshmen



## INTERCONNECTEDNESS OF INCOME TO EDUCATION

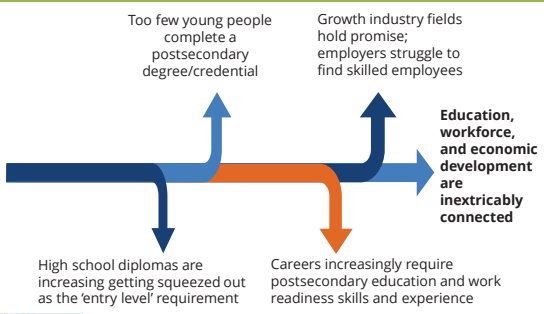






**Call to Action:  
Tennessee's  
Opportunities**

### EDUCATION/CAREER PATHWAYS



Too few young people complete a postsecondary degree/credential

Growth industry fields hold promise; employers struggle to find skilled employees

High school diplomas are increasing getting squeezed out as the 'entry level' requirement

Careers increasingly require postsecondary education and work readiness skills and experience

**Education, workforce, and economic development are inextricably connected**

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### QUESTIONS?



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### SMALL GROUP EXERCISE


- What do you see as the key issue(s) facing TN in this area?
- What do you believe are the key attributes that a "ready" person must have entering into the workforce?

TN Department of Education

**Pathways to Prosperity Network**  
 A MEMBERSHIP OF EDUCATION LEADERS AND THE HARVARD GRADUATE SCHOOL OF EDUCATION

## Juxtaposition of Education and Industry National and Global Perspectives and Models

Robert (Bob) Schwartz  
 Harvard Graduate School of Education,  
 Pathways to Prosperity Network



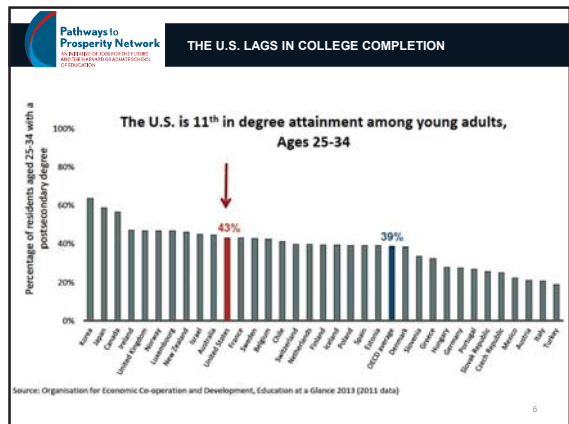
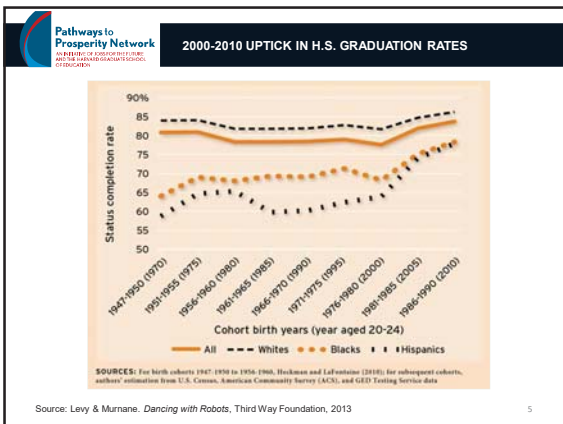
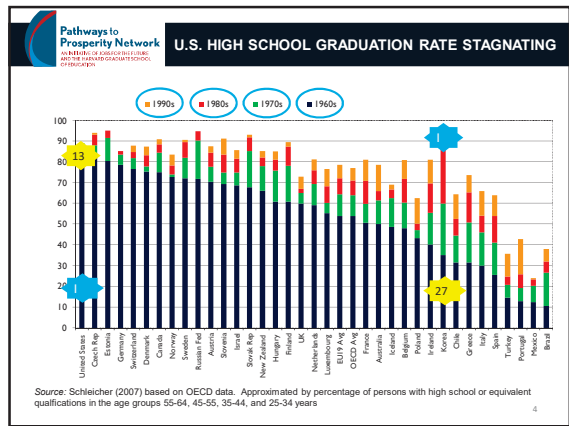
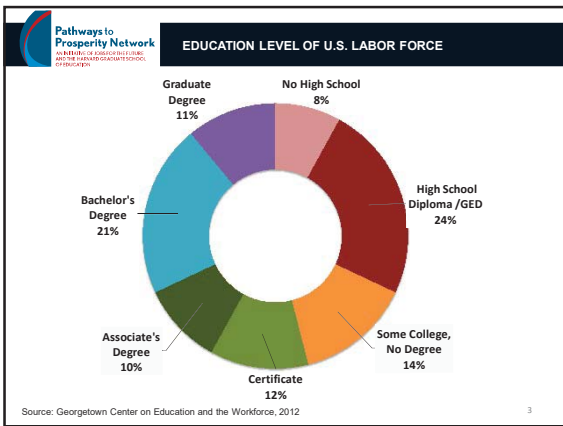
**Pathways to Prosperity Network**  
 A MEMBERSHIP OF EDUCATION LEADERS AND THE HARVARD GRADUATE SCHOOL OF EDUCATION

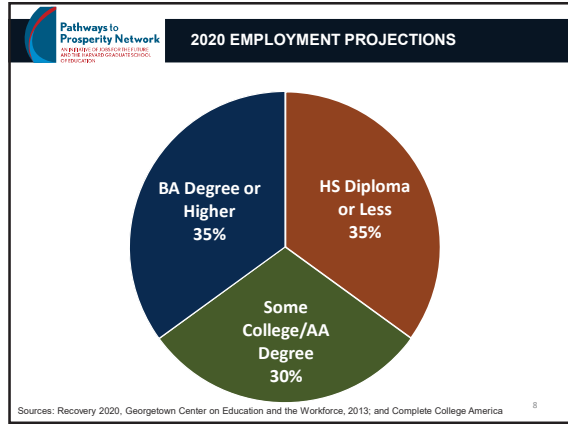
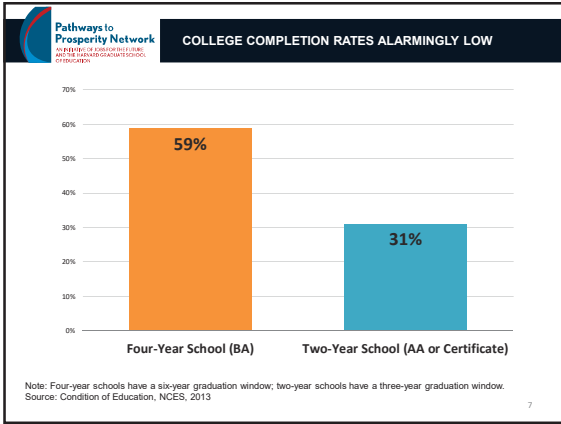
## THE PATHWAYS TO PROSPERITY REPORT

**“The American system for preparing young people to lead productive and prosperous lives as adults is clearly badly broken. Failure to aggressively overcome this challenge will surely erode the fabric of our society.”**



2





### EXAMPLES OF JOBS THAT REQUIRE MIDDLE SKILLS

Sector	Type of Job	Number of Openings	Median Annual Pay
Computers & IT	Computer Support Specialists	607,100	\$46,260
Engineering	Electrical Technicians	151,000	\$56,040
Health Care	Respiratory Therapists	112,700	\$54,280
Life, Physical & Social Sciences	Environmental Science Technicians	29,000	\$41,380
Production	Semiconductor Processors	21,100	\$33,130

Source: "Who Can Fix the Middle Skills Gap?" Harvard Business Review, 2012; T Kochan, D Finegold, P Osterman Data from Occupational Outlook Handbook, U.S. BLS, 2010

### OCCUPATION MATTERS

- 43% of young workers with Licenses and Certificates earn more than those with an Associate's degree
- 27% of young workers with Licenses and Certificates earn more than those with a Bachelor's degree
- 31% of young workers with an Associate's degree earn more than those with a Bachelor's degree

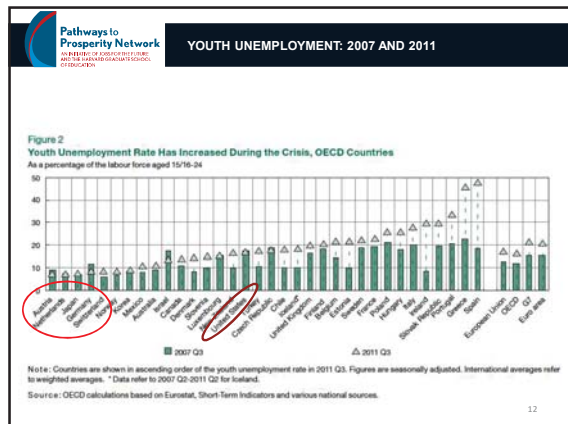
Source: Georgetown University Center on Education and the Workforce

### STEM OPPORTUNITIES ABOUND

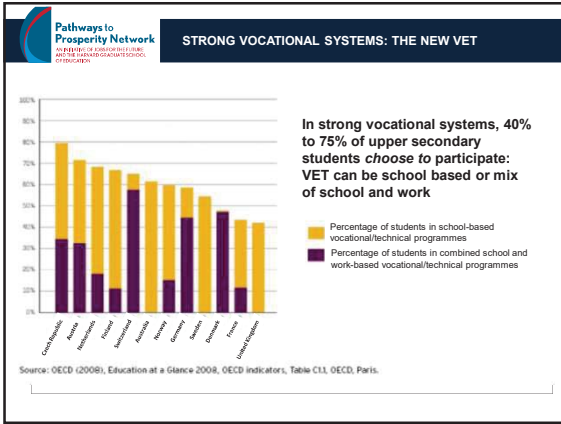
Previous STEM studies have neglected the many blue collar and technical jobs that require considerable STEM knowledge. But this study finds that **50% of STEM jobs do not require a bachelor's degree**. As a result, STEM knowledge plays a much larger role in our economy than previously thought:

- There are **26 MILLION** STEM jobs in the U.S.
- STEM jobs comprise **20%** of all U.S. jobs.
- The share of jobs requiring STEM knowledge has **doubled** since the Industrial Revolution.

Source: The Hidden STEM Economy, Brookings, 2013







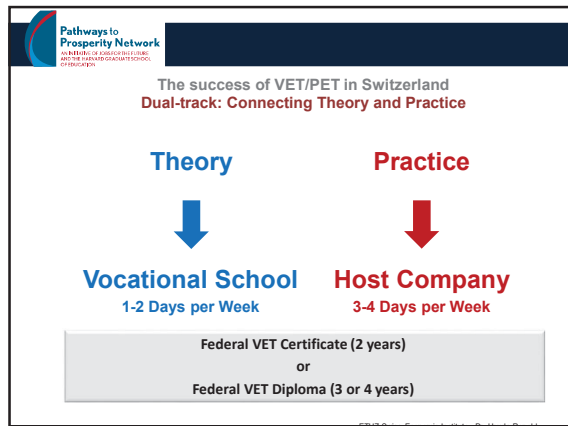
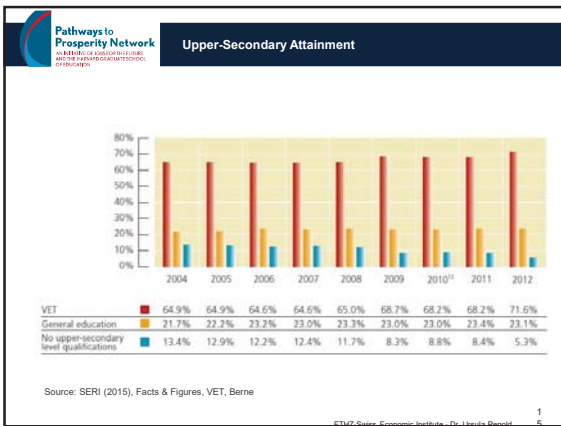
**Pathways to Prosperity Network**  
AN ALLIANCE OF EDUCATION LEADERS AND THE SWISS CONFEDERATION OF EDUCATION

### Competitiveness: Switzerland at the Top

Ranking	European Innovation Scoreboard	Global Competitiveness Report	World Competitiveness Yearbook	Global Talent Competitiveness Index 2014
1	Switzerland	Switzerland	Hong Kong	Switzerland
2	Sweden	Singapore	USA	Singapore
3	Denmark	Sweden	Switzerland	Luxembourg
4	Germany	Finland	Singapore	United States

Sources:  
ESI: European Innovation Scoreboard, 2012  
WCI: Global Competitiveness Report, 2012  
IMD: World Competitiveness Yearbook, 2012  
GTCL: Global Talent Competitiveness Index, 2014

ETHZ-Swiss Economic Institute - Dr. Ursula Renold 14



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### THE PATHWAYS TO PROSPERITY STATE NETWORK: AN OVERVIEW

FROM REPORT TO ACTION

ETHZ-Swiss Economic Institute - Dr. Ursula Renold 18

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### THE PATHWAYS TO PROSPERITY NETWORK

Twelve states with 40+ regions, rural to urban, serving as starting places for demonstrating success, with a focus on scaling grades 9-14 integrated academic and career pathways statewide. **Not a new program or add-on reform, but a strategic alignment and bolstering of existing initiatives to improve education, workforce, and economic outcomes.**

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AN ALLIANCE OF EDUCATION LEADERS AND THE BUSINESS/GRADUATE SCHOOL COMMUNITY

### OUR GOAL: SYSTEMS OF 9-14+ PATHWAYS

**ALL YOUNG PEOPLE**

- Complete high school with at least 12 college credits and WBL experience
- Attain postsecondary credential with value in regional labor market
- Launch a career in a high-demand, high-growth, high-wage occupation
- Advance in career and pursue further education as interested

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### NATIONAL SCOPE FOR EVIDENCE BASE

#### Early College High Schools

- Located in 26 states and the District of Columbia
- Around 300 schools from initial JFF Gates initiative; others started on their own
- Serve over 100,000 students
- Annual gathering of ~600 faculty, principals, and leaders

JFF JOBS FOR THE FUTURE 21

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### OUTCOMES FROM EXTERNAL EVALUATION

- High School Graduation Rate: 92 percent
- College Enrollment Rate: 86 percent
- 1 Year + Transferrable Credits: 44 percent
- Earned Associate's Degree: 25 percent

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### % OF GRADUATES ENROLLING IN COLLEGE

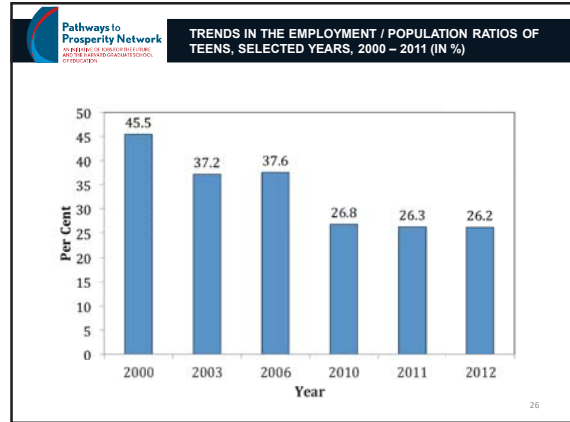
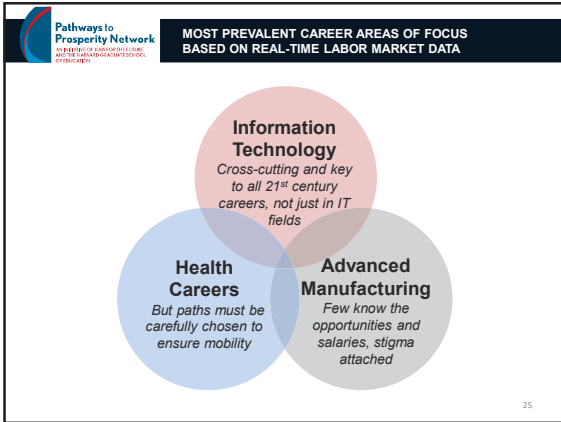
Category	% of Graduates Enrolling in College
Early College Schools	78%
National Average	69%
National Average for Low-Income Students	55%

JFF JOBS FOR THE FUTURE 23

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### KEY PATHWAYS IMPLEMENTATION LEVRS

- Engaged employers: work-based learning opps. & curricula support
- Intermediary links between education and employers
- Committed state leaders and favorable policy environment
- Early, sustained career counseling and information
- Rigorous Academic and Career 9-14 Pathways



**FOR MORE INFORMATION, CONTACT:**

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**PATHWAYS TO PROSPERITY PROJECT**  
AN INITIATIVE OF THE JOHNS HOPKINS UNIVERSITY  
 CENTER FOR TALENTED-GRADE-SCHOOL STUDENTS  
 FEBRUARY 2011

## P-TECH Grades 9-14 School Model

Maura Banta  
Corporate Citizenship & Corporate Affairs  
IBM Corporation

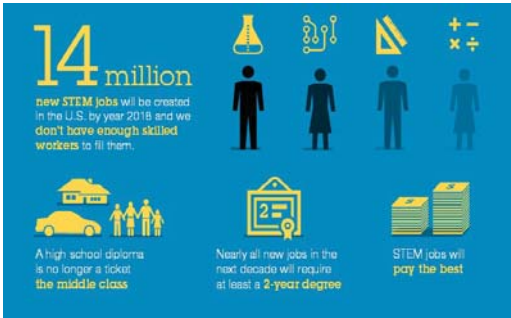


## Brooklyn High School – a Profile

**P-TECH**  
Pathways in Technology  
Early College High School



## The context for our work



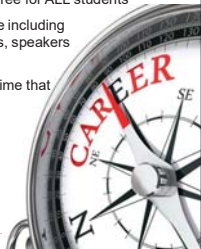
## A new model for education: P-TECH 9-14

- **Focus:** A new grade 9-14 public school model focused on STEM fields and Career and Technical Education
- **Mission:** Enable students to master the skills that they need either to graduate with a no-cost Associates in Applied Science (AAS) degree that will enable them to secure an entry-level position in a growing STEM industry, or to continue and complete study in a four-year higher education institution.

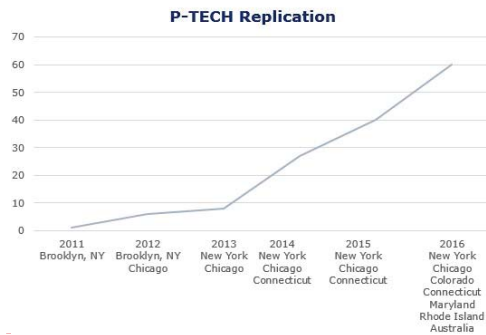
**P-TECH: The pathway from classroom to career to a stronger economy**

## Key Tenets

- **Systemic Partnership:** K-12, higher education, and industry
- **Public School Model:** Open to all students, with no cost to students and their families
- **Early College:** Six-year scope and sequence *integrating* high school and college coursework and leading to an AAS degree for ALL students
- **Career-Readiness:** Workplace Learning sequence including skills mapping, coursework, mentors, worksite visits, speakers and skills-based, paid internships
- **Personal Pathways:** Focus on mastery, not seat time that enables students to graduate in 4, 5, or 6 years



## High School Re-design Movement



## IBM partner schools

### 1. Pathways in Technology Early College High School (P-TECH) :

Partnership: New York City Department of Education, The City University of New York, New York City College of Technology, IBM

### 2. Sarah E. Goode STEM Academy:

Partnership: Chicago Public Schools, City Colleges of Chicago, Richard J. Daley College, IBM

### 3. Excelsior Academy:

Partnership: Newburgh Enlarged City School District (NY), SUNY Orange, IBM

### 4. Norwalk Early College Academy:

Partnership: Norwalk Public Schools (CT), Norwalk Community College, IBM



## Real Results

### P-TECH Brooklyn, NY (2011)

**Student Profile:** 522 students; 70% male; 30% female; 96% Black or Hispanic; More than 80% free or reduced lunch; 16% IEPs; 90% average attendance

#### College Readiness: Algebra

- 84% of students from first cohort after eight semesters (4 years)
- 64% of students from second cohort after six semesters (3 years)
- 40% of students from third cohort after four semesters (2 years)

#### College Readiness: English

- 82% of students from first cohort after eight semesters (4 years)
- 71% of students from the second cohort after six semesters (3 years)
- 50% of students from the third cohort after four semesters (2 years)

### Goode Chicago, IL (2012)

**Student Profile:** 835 students; 50% male; 50% female; 97% Black or Hispanic; More than 88% free or reduced lunch

- 93% average attendance

#### Academic Achievements

- Fall 2015: 133 students enrolled in college classes
- Of 12<sup>th</sup> grade students, 17 have earned a total of 20 or more college credits
- Of students who were enrolled in college courses for spring 2015:
  - 50 earned between 3 and 6 credits
  - 30 earned between 9 and 15 credits
  - 22 earned between 16 and 25 credits
  - 17 earned between 26 and 30 credits

## Real Results

### Excelsior Newburgh, NY (2014)

**Student Profile:** 100 students; 54% male; 46% female; 54% Hispanic, 32% Black, 13% White, 1% Asian; 74% free or reduced lunch; 8% IEPs; 95% attendance rate

#### Academic Achievements

- 56% of all students made honor roll for the 2014 – 15 school year (overall average of 84.5 or above)
- 90% pass rate: New York State Regents Exam for U.S. History
- 76% pass rate: New York State Regents Exam for Algebra I
- 78% (39 of 50) rising 10<sup>th</sup> grade students will be enrolled in college coursework (fall 2015)

### NECA Norwalk, CT (2014)

**Student Profile:** 153 students  
61% male; 39% female; 48% Hispanic; 34% Black; 14% White; 4% Asian

#### Academic Achievements

- 40% of students placed into college-level English and mathematics by the end of Year 1
- 28% of students achieved high honor roll (GPA of 3.4 or higher)
- 22% of students achieved honor roll (GPA of 3.0 – 3.39)

## The First Six: P-TECH Brooklyn Graduates

June 2015: Six students graduated with their high school diplomas and AAS degrees



- Accelerated through the program in 4 years
- All graduated with AAS in Computer Information Systems, awarded by New York City College of Technology

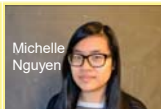
## “The First Six”: College Bound



- Born in Ghana, immigrating to the U.S. at age 7
- First in family to graduate with a college degree
- 3.6 GPA in college courses
- Internship with IBM Research, where he created a web site on 3-D printing
- Syracuse University



- Member of Robotics Team and Math Squad
- Internship with IBM Research, where he explored 3-D printing and augmented reality
- Macaulay Honors College, Queens College – where he intends to pursue his Bachelor's in computer science



- First student to take college calculus as a Sophomore and earned an "A"
- Internship with IBM Research, where she explored augmented reality and how it could be used in healthcare and education
- Long Island University

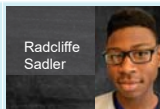
## “The First Six”: New IBMers



- Entered high school as average student
- First in family to graduate with a college degree
- One of nation's top sprinters (400m)
- Internship with IBM's Global Technology Services
- Will join IBM Market Development & Insights as an Associate Analyst



- First in his family to graduate with a college degree
- Internship with IBM Digital Marketing; according to his supervisor, Gabriel is "one of the brightest high school students I've ever met."
- Turned internship into a job offer and will join IBM as a Digital Commerce Specialist

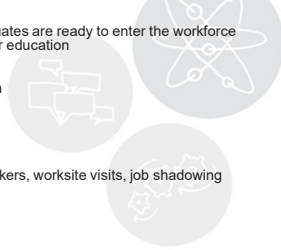


- Introduced President Obama at P-TECH Brooklyn in 2013
- Internship with IBM Sales & Distribution, conducting research on the insurance industry
- Will join IBM Market Development Insights team as an Associate Analyst

## Key innovation: Industry partnership

Industry is a full partner in all aspects of the school, but has special responsibility over the **Workplace Learning umbrella**.

- Skills mapping to ensure graduates are ready to enter the workforce and/or pursue continued higher education
- Workplace Learning curriculum
- **Mentors for all students**
- Workplace experiences: Speakers, worksite visits, job shadowing
- Skills-based, paid internships
- First in line for jobs



## Mentoring

**men·tor** *noun* [men-tawr, -ter]

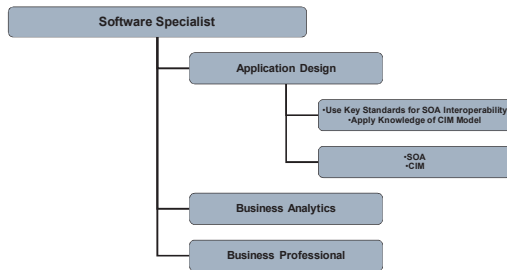
**noun**

1. a wise and trusted counselor or teacher.
2. an influential senior sponsor or supporter.

- All students are paired with an IBM mentor/industry professional who:
  - Inspires, encourages, role models
  - Provides meaningful feedback on coursework
  - Provides guidance, strategies and tools for navigating through the school program, including high school and college courses
  - Serves as a window into careers, emphasizing workplace learning skills

## IBM Skills Mapping Process

- Map hard/soft skills to IT jobs requiring an AAS degree
- Skills feed into curriculum development



## Workplace Learning Curriculum

Industry works with teachers and faculty to develop coursework focused on employability skills

- Creativity and innovation
- Flexibility and adaptability
- Communication of complex ideas, orally and in writing
- Ability to work within and lead multi-cultural teams
- Critical thinking and problem solving skills
- Awareness of core societal challenges impacting the way we do business in the 21st century
- Highest global integrity standards

### IBM Employment

Are you a problem solver?  
Are you a difference maker?  
Are you an innovator?

Help us build a smarter planet



## Internships

- Skills-based, paid internships for eligible students beginning the Summer after Year 3
- First internships at P-TECH Brooklyn: Summer 2014
  - 62 eligible students based upon college class taking and participation in workplace learning class
  - 41 internships at IBM
  - 6-8 weeks, M-Th, with Friday seminars at school
  - Projects requiring students to demonstrate technical and workplace skills mastered at P-TECH
- Summer 2015: Internships at P-TECH Brooklyn and Sarah E. Goode STEM Academy (Chicago)
  - IBM to provide 75 across both schools

**Why IBM?**  
We're more than an IT company.  
We're an opportunity company.

## "First in Line" for Jobs

June 2015: Six students graduated with their high school diplomas and AAS degrees

### Profile

- Accelerated through the program in 4 years
- All graduated with AAS in Computer Information Systems

### Next Steps

- IBM interviewed students who were interested in pursuing jobs

*Gabriel is one of the brightest high school students I've ever met. He will accomplish great things if he continues being driven and motivated. He is a natural leader and as a next step should learn how to collaborate with and motivate his peers to accomplish team goals as a unit. It's been a pleasure to work with Gabriel and I have no doubt he will go far in his career.*



## The Playbook: P-TECH 9-14 School Model

- [www.ptech.org](http://www.ptech.org)
- Implement with quality and fidelity
- No need to reinvent the wheel
- Share best practices
- Highlight exemplary efforts

**P-TECH is transforming lives.**

"When people come together and say, 'students deserve a quality educational opportunity, this is the result of that... This is what educational reform looks like.'"

— Karen Amulet,  
Director of Norwich Early College Academy (NECA)

"My experience has made me want to be an engineer more than ever. It's not just to be an engineer, but to be the person who creates the equipment, makes even more equipment."

— Spencer,  
Student at P-TECH Brooklyn

P-TECH 9-14 Schools

## National recognition



**"This country should be doing everything in its power to give more kids the chance to go to schools like this one."**

— President Barack Obama at P-TECH (October 25, 2013)

- Major media: *Time Magazine*; *Wall Street Journal*; *The New York Times*, *PBS NewsHour*



- Perkins Reauthorization: P-TECH as a model

## Career Forward Task Force

### Agenda

April 22, 2016

*Light Breakfast - (Optional) starting at 8:15am*

- |      |   |            |
|------|---|------------|
| I.   | <i>Welcome &amp; Review of Charge and Approach</i><br>Dr. Candice McQueen<br>TN Commissioner of Education   | 8:30 a.m.  |
| II.  | <i>Education and Workforce: Recent Federal Activity and Acts</i><br><i>An Overview of WIOA, ESSA, Perkins and Their Interconnectedness</i><br>Steve Voytek<br>Advance CTE, Washington D.C.  | 8:45 a.m.  |
| III. | <i>Small Group Discussion</i>   | 9:30 a.m.  |
| IV.  | <i>Break</i>  | 9:45 a.m.  |
| V.   | <i>State Economic &amp; Workforce Development</i><br><i>Plans, Approaches and Projections</i><br>Burns Phillips, TN Commissioner of Labor & Workforce Dev<br>Ann Thompson, Dir. Workforce Dev, TN Dept of Econ & Comm Dev<br><i>Employer Panel:</i> Jeff Frazier, Dir. Eastman Chemical/RCAM<br>Cal Wray, Exe. Dir. Clarksville-Montgomery County EDC<br>Suzanne Payne, Dir. Corp Social Responsibility, Unum<br>Joining: Burns and Ann | 9:55 a.m.  |
| VI.  | <i>Secondary and Postsecondary CTE in TN (Readiness Series)</i><br><i>Secondary:</i> Candi Norwood, Dir. Student Success, TDOE<br>Chelsea Parker, Exec. Dir. Work-Based Learning, TDOE<br>Blake Shearer, Coord. HS Interventions-Transitions, TDOE<br><i>Postsecondary:</i> Chelle Travis, Asst. V.C. Student Services, Office of TCAT, TBR<br>Michael Tinsley, Coord. Perkins IV, Office of CC, TBR<br><br><i>Q&amp;A:</i> All         | 10:55 a.m. |
| VII. | <i>Lunch Break</i>  | 11:50 a.m. |





- |       |  |            |
|-------|--|------------|
| VIII. | <i>Small Group Discussion</i>                | 12:10 p.m. |
| IX.   | <i>Circling Back</i><br>Commissioner McQueen | 12:55 p.m. |
| X.    | Dismissal                                    | 1:00 p.m.  |



## CAREER FORWARD TASK FORCE

April 22, 2016

### CHARGE: CAREER FORWARD TASK FORCE

- Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
- Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.



Career Forward Task Force

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### APPROACH: CAREER FORWARD TASK FORCE

The Task Force will meet monthly to learn, listen, discuss, and craft recommendations. In doing so, the Task Force will work to answer three guiding questions.

1. How do we know when a student is “career ready” at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state’s economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?



Career Forward Task Force

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### MARCH MEETING: TAKEAWAY QUESTIONS

- What are the best predictors of postsecondary and career readiness?
- How are we tracking outcomes? Where are our students going and what are they doing?
- Should we be encouraging more Early College opportunities?
- How are we making student “pathways” more obvious and best using our school counselors?
- How are we embedding more authentic experiences for all students?



Career Forward Task Force

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### AREAS OF FOCUS/REMAINING MONTHS

#### March:

Kickoff: focused on Charge and Setting the Stage; high level review of Interconnectedness of Education, Industry, and Career Choices

#### April:

Review of Federal Acts and State Approaches around Education, Labor and Industry; Begin defining a “Ready Student” by review of TN’s secondary/postsecondary CTE and Work-Based Learning

#### May:

Dive into defining a “Ready Student” by review of data available and where there are gaps; review Early Postsecondary, Student Transitions; Pathways TN; Role of Certain Adult Stakeholders (e.g. counselors); ACT WorkKeys

#### June:

Structures and Systems: existing Strengths, Alignments, Barriers, Gaps, Culture/ Perceptions, Models of Practice at State, Regional, Local Levels; Areas of Opportunity

#### July:

ROI of Education-Industry Partnerships, New Approaches to Data Collection, Evaluation, and Assessment to Ascertain “Ready Student;” Sustainability Issues

#### August:

Discuss Identified Overarching Principles and Recommendations; Gain Sign Off



Career Forward Task Force

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### FOCUS OF APRIL GATHERING

#### I. WELCOME & REVIEW OF CHARGE AND APPROACH

II. EDUCATION AND WORKFORCE: RECENT FEDERAL ACTIVITY AND ACTS AN OVERVIEW OF WIOA, ESSA, PERKINS AND THEIR INTERCONNECTEDNESS

#### III. SMALL GROUP DISCUSSION

IV. STATE ECONOMIC & WORKFORCE DEVELOPMENT PLANS, APPROACHES AND PROJECTIONS: PRESENTATION AND EMPLOYER PANEL

#### V. SECONDARY AND POSTSECONDARY CTE IN TN (DEFINING READINESS SERIES)

#### VI. LUNCH BREAK

#### VII. SMALL GROUP DISCUSSION

#### VIII. CIRCLING BACK & DISMISSAL



Career Forward Task Force

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**ADVANCE >> CTE**  
 State Leaders Connecting Learning to Work

**Federal Education and Workforce Development Policies:  
 Weaving Together WIOA, ESSA, and Perkins**

Steve Voytek, Government Relations Manager  
 April 22, 2016

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**Today's Agenda**

- Overview, crosscutting themes, and policy mechanics of:
  - WIOA
  - ESSA
  - Perkins
- Where to from here?
- Q & A


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**Workforce Innovation and Opportunity Act (WIOA)**

ADVANCE >> CTE  
 State Leaders Connecting Learning to Work

**How We Got Here**

- Signed into law July 2014, replaces the Workforce Investment Act (WIA)
- Implementation began July 1, 2015
- Focus on alignment across federal workforce, education programs

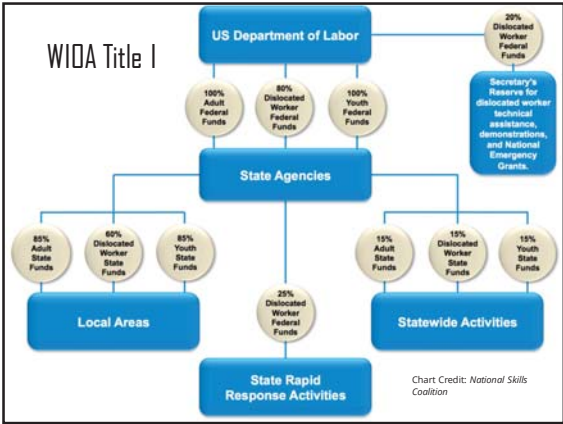


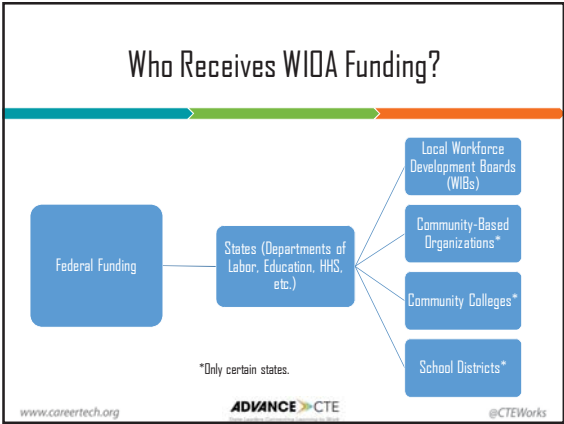
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**WIOA- Four Titles**

- Title I – Workforce Development Activities
- Title II – Adult Education & Family Literacy (AEFLA)
- Title III – Wagner-Peyser Act (Employment Services)
- Title IV – Rehabilitation Act of 1973 (Vocational Rehabilitation)

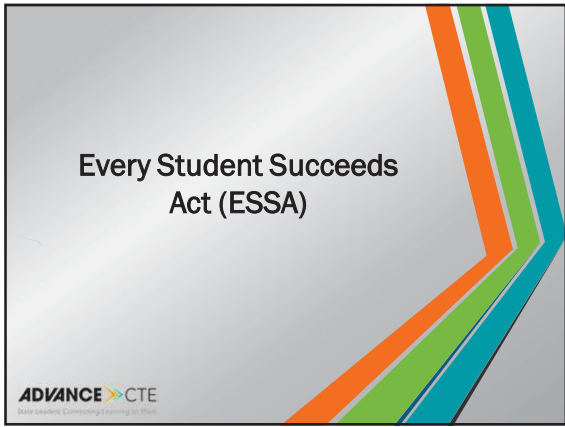
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- ## WIOA Title I- Governance & Infrastructure
- Requires establishment of business-led state and local workforce development boards (WDBs)
  - Local WDBs oversee one-stop system, select providers of adult and youth services
  - American Job Centers -must provide universal access to core programs, other federal workforce programs
- americanjobcenter
- www.careertech.org    ADVANCE CTE    @CTEWorks

- ## WIOA Key Changes/Themes
- New state and local planning options
  - Cross-program data and measurement
  - Program implementation (career pathways/ sector strategies)
  - Two most emphasized terms:
    - "In-Demand" industries/ occupations/ sectors
    - "Economic self-sufficiency"
  - Youth funding: ISY vs DSY (16-24)
  - Participant choice (elimination of sequence of services)
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- ## How We Got Here
- Signed into law December 2016, replaces the No Child Left Behind Act (NCLB)
  - Implementation began January, 2016
  - Focus on state and local flexibility for the law's implementation
- 
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- ## ESSA - An Overview
- Renews the Elementary and Secondary Education Act of 1965 (ESEA)
  - Supplemental federal funds for high-needs districts/schools
  - Promote and strengthen student achievement
  - Scope of ESEA has grown substantially since 1965
  - ESSA narrows scope and devolves much of the former federal role/responsibilities to state and local entities
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### ESSA: Roles and Responsibilities (simplified)

	USDE	SEA	LEA
<b>Funding</b>	Determine state allocations	Determine LEA allocations	Determine school allocations
<b>Plans</b>	Review and approve state plans	Review and approve LEA applications	Develop and submit application for funds to SEA
<b>Assistance &amp; Guidance</b>	Provide technical assistance and guidance (non-binding) to SEAs	Provide technical assistance to LEAs	Administer funds in accordance with ESSA
<b>Compliance</b>	Monitor SEAs' compliance with the law	Monitor LEAs' compliance with statute and state laws	Be responsive to monitoring visits by SEA
<b>Data / Reporting</b>	Collect data and information/develop non-regulatory guidance (non-binding)	Collect data and information required to fulfill requirements of ESSA	Submit data and reports as required

### ESSA – Standards & Assessments


- States must establish “challenging standards” in:
  - English/Language Arts;
  - Mathematics; and
  - Science
- Annual assessments in grades 3 through 8 + once in high school
- Allowable: Innovative Assessment Pilots



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### ESSA – Accountability/ Public Reporting

- States establish long-term, statewide goals and interim targets
- States create accountability system that must incorporate five metrics
- States establish methodology for identifying low-performing schools + related intervention processes
- States and districts must make available to the public “report cards” on annual basis



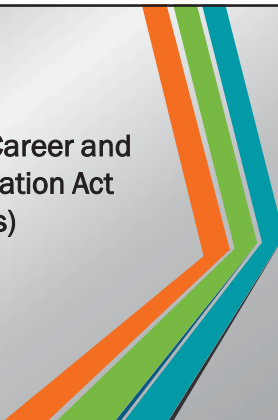
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### ESSA – Key Intersections WIDA/Perkins

- State and local plan coordination
- State standards development
- “*Well-Rounded Education*” & CTE
- “*Recognized postsecondary credentials*”
- Measure(s) of “*school quality or student success*”
- Greater support for dual/concurrent enrollment
- Student transitions between secondary and postsecondary education

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## Carl D. Perkins Career and Technical Education Act (Perkins)

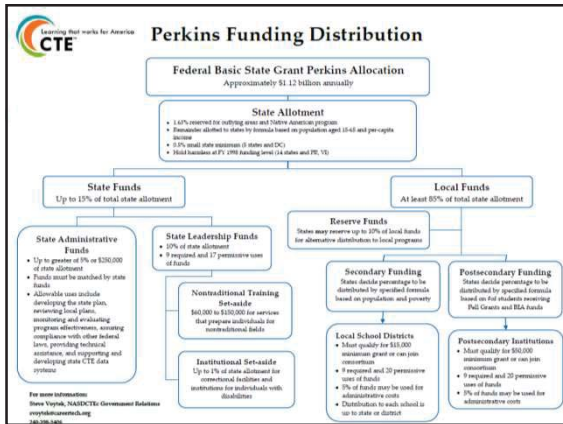


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Advancing Quality Career and Technical Education

### Perkins – An Overview

- Sole federal investment in CTE
- Sets expectations framework for CTE programs
- Codified “CTE” in lieu of “vocational education”
- Overarching purposes of Perkins:
  - Program improvement/scalability
  - Systems alignment
  - Bridge Builder\*

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## Five Defining Themes of Perkins IV

- Academic and technical integration
- Accountability and improvement
- Links to business and industry
- Secondary-postsecondary connections
- Linkages between other federal programs (WIA, ESEA, and HEA)

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## Perkins V Reauthorization: Emerging Issues

- Alignment to other federal legislation
- Labor market alignment
- Public-private partnerships
- Secondary-postsecondary connections
- Performance/accountability
- Supporting innovation & state flexibility
- Ensuring equitable access

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## Weaving it All Together

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State leaders. Connecting learning to work.

## Federal Policy Landscape: An Outlook

- Order of Congressional consideration of WIOA → ESSA → Perkins → HEA is significant
- Tight federal fiscal environment (programs are asked to do more with less)
- Pendulum between federal and state roles/responsibilities has swung

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## Federal Intersection Points and Strategies to Think About

- Accountability systems:
  - Share responsibility across programs/systems
  - Establish limited set of quality indicators
  - Design programs/services around desired outcomes
- Braiding funding streams
- Performance-based/incentive funding
- Connecting Career Pathways, CTE POS, and Sector Strategy initiatives

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## Where is Federal Policy Going from Here?

- Recognition that PS education is a necessity
- Systems alignment:
  - Program delivery/implementation
  - Data systems
  - Common definitions/terminology
- Focusing on outcomes, not inputs
- Leveraging data for program development, implementation, and improvement

## Questions?

Steve Voytek  
[svoytek@careertech.org](mailto:svoytek@careertech.org)

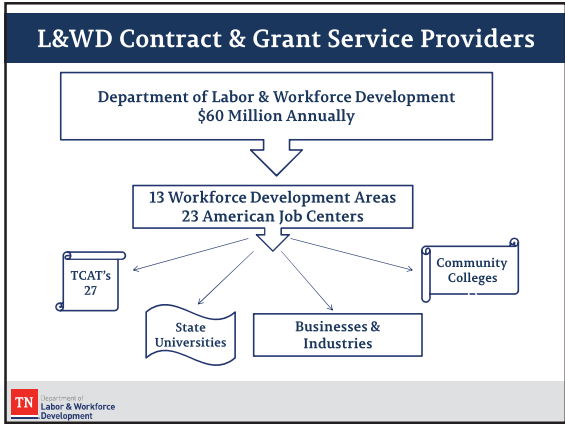


**Department of Labor & Workforce Development**

**Career Forward Task Force**

“ A Job Cures Many Ills”

Burns Phillips - April 22, 2016



### LWD Workforce Development ROI



\$1 = \$38.00 - \$58.00 Wages  
\$7.85 Taxes

Sparks Bureau of Business and Economic Research/Center for Manpower Studies, University of Memphis

TN Department of Labor & Workforce Development

### LWD - Workforce Services Goals

**Increase Entered Employment Rate of Participants Served**

Baseline 55% - Goal 60% Performance 66% and 67%

★

**Implementation of W.I.O.A. Combined State Plan**

TN Department of Labor & Workforce Development



**Continual Learning**

### Economic Competitiveness

Having a Steady Supply of High Skilled Workers (Scientists, Researchers, Engineers) is Most Often Perceived as the Top Requirement for Manufacturing Competitiveness.

★

However, Having the Capacity for Innovation Driven by a Plentiful and Skilled Workforce at **All Levels** is What Will Ultimately Differentiate the Long Term Winners in the Race for Manufacturing Competitiveness and Economic Growth.

TN Department of Labor & Workforce Development



## Rapid Evolution of Technology

80% of Technology Now in Use Will be  
Obsolete in 10 Years



33% Existing Jobs - 50% New Jobs

Created Between 2008-2018 Will Require  
a Postsecondary Degree or Credential



## 2020 Workforce

By 2020 only 20% of the workforce will  
come from U.S. public schools.....

80% of workforce will consist of  
adults currently in the workforce or  
those trying to enter it today!

Georgetown University Center for Education and Workforce



## Tennessee Workforce 2016

3,050,000

550,000  
No High School Diploma

900,000  
Unfinished Post Secondary Credentials



## Looking Forward

P.I.V.O.T

“Providing Innovative Viable Opportunities  
for Training”



## JSCC AMT Consortium – Jackson Tennessee

Advanced Maintenance Technical Co-op  
(Toshiba)

Twenty Businesses and Jackson State Community College  
2 Year Program

Students Work 2 Days a Week (\$12 hour) , Classroom 3 Days a Week

Businesses Each Contribute \$500 to Consortium Annually

Businesses Also Contribute Equipment to Jackson State



## Lee Company – Nashville Tennessee

Lee University

Accredited Training Site (ATS)  
Through  
National Center for Construction Education & Research  
(NCCER)

Partnership with Lipscomb University and the Department of  
Education to find non-traditional formats of education and  
through help from the American Council of Education accrediting  
LCU hours for college credit towards an *applied science degree*.





## BUSINESS DEVELOPMENT

New Industry Recruitment	Existing Industry Expansion	Entrepreneurship
<ul style="list-style-type: none"> <li>FastTrack Grant Program</li> <li>Select Tennessee</li> <li>Memphis Megasite</li> </ul>	<ul style="list-style-type: none"> <li>FastTrack Grant Program</li> <li>TNTrade</li> <li>Film, Entertainment &amp; Music Commission</li> </ul>	<ul style="list-style-type: none"> <li>Business Enterprise Resource Office</li> <li>Launch Tennessee</li> </ul>

Department of Economic & Community Development

## REGIONAL JOB BASE CAMPS

Department of Economic & Community Development

## PROJECT MANAGEMENT TEAM

Alex Bertelli    Jamari Brown    Bryan Farlow    Cody Huddleston    Chassen Haynes    Victoria Hirschberg

Aerospace & Defense  Energy Tech.	Healthcare Business  Services  Data Centers  Call Centers  Back Office	Advanced Manufacturing  Warehouse, Distribution & Logistics	Food & Agribusiness  Chemicals, Plastics & Rubber	Automotive	Automotive

Department of Economic & Community Development

## RURAL DEVELOPMENT AND EDUCATION ALIGNMENT

Rural Development	Education Alignment
<ul style="list-style-type: none"> <li>ThreeStar</li> <li>Tennessee Main Street</li> <li>Tennessee Downtowns</li> <li>Retire Tennessee</li> <li>National Flood Insurance Program</li> </ul>	<ul style="list-style-type: none"> <li>Community Development Block Grants</li> <li>Delta Regional Authority Grants</li> <li>Appalachian Regional Commission Grants</li> </ul>
	<ul style="list-style-type: none"> <li>Tennessee Promise</li> <li>Tennessee Reconnect</li> <li>Tennessee LEAP</li> <li>Workforce360</li> </ul>

Department of Economic & Community Development

## CDBG, ARC, DRA

### Community Development Block Grants

- Administer funding from the U.S. Department of Housing and Urban Development to promote economic and community development in small cities across the state
- Most common projects include sewer and water system improvements, community livability projects such as the purchase of fire trucks, drainage improvements, building community centers, and extending water and sewer lines
- Since 2011, more than \$190 million in projects have been funded

### Appalachian Regional Commission Grants

- Receive approximately \$6 million per year for community and economic development projects in the 52 Middle and East Tennessee counties served by the ARC
- Focused on funding projects that have job creation associated with them

### Delta Regional Authority Grants

- Receive approximately \$1 million per year for community and economic development projects in the 21 West Tennessee counties served by the DRA
- Focused on projects that improve workforce development, improve health outcomes, and create jobs

## FOREIGN DIRECT INVESTMENT

### FOREIGN DIRECT INVESTMENT

- There are 919 foreign-based establishments employ over 126,000 people in Tennessee.
- These establishments have committed \$33.3 billion in capital investment.

### TOP FDI COUNTRIES

Parent Country	Capital Investment
Japan	\$17.7 B
Germany	\$5.1 B
Canada	\$2.5 B
United Kingdom	\$1.4 B
Korea	\$993 M

Source: TNECD

### EXPORTS IN TENNESSEE

- Tennessee exports totaled more than \$32.4 billion in 2015
- Exports from the state have increased 25.0% since 2010
- Top export markets include: Canada, Mexico, China, Japan and Belgium
- Top export products include: Medical Equipment and Supplies; Motor Vehicle Parts; Motor Vehicles; Computer Equipment; and Navigational, Measuring, Medical and Control Instruments

Source: USATrade

## BUSINESS CLIMATE



## QUALITY OF LIFE

130  
State Parks and  
Natural Areas

2nd  
Lowest cost of living of  
any state

30.3%  
Below the national  
average of  
housing prices



## ACCOLADES

First-ever back-to-back State of the Year  
winner for economic development  
2013 and 2014  
Business Facilities

#4

State for jobs created  
through FDI in 2014  
IBM's Global Location  
Trends Report

#1

Certified Sites and Shovel-  
Ready Programs  
Area Development

#1

Education: Race to the  
Top Leaders  
Business Facilities

#1

Overall Infrastructure and  
Global Access  
Area Development

#1

Automotive Manufacturing  
Strength  
Business Facilities

#2

Best Business Climate  
Business Facilities

## CORPORATE HEADQUARTERS IN TENNESSEE



Home to 11 Fortune 500 Companies

## ANNOUNCEMENTS

 <b>2,000 Jobs</b> <b>\$600mm</b> Chattanooga	 <b>1,500 Jobs</b> <b>\$102mm</b> Mt. Juliet	 <b>300 Jobs</b> <b>\$1.6B</b> Clinton	 <b>1,800 Jobs</b> <b>\$800mm</b> Clarksville	 <b>3,474</b> <b>\$149.05mm</b> Murfreesboro Nashville Chattanooga Charleston Lebanon
 <b>4,332 Jobs</b> <b>\$810.35mm</b> Smyrna Dechard	 <b>125 Jobs</b> <b>\$321mm</b> Memphis	 <b>1,500 Jobs</b> <b>\$66.15mm</b> Nashville	 <b>1,164 Jobs</b> <b>\$585mm</b> Maryville Athens	 <b>70 Jobs</b> <b>\$600mm</b> Clarksville

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## TENNESSEE INCENTIVES

**State Incentives Include:**

- Training grants
- Infrastructure grants
- Discretionary grants covering other expenses
- Tax credits and exemptions

**Incentives are based on:**

- Number of Jobs
- Quality of Jobs
- Capital Investment
- Location

In Tennessee, we're fostering economic growth with flexible incentives that reduce capital expenses, lower operating costs and minimize risk.

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## ELIGIBLE INDUSTRIES

Type	Description
<b>Headquarters</b>	Administrative, research and development, planning, marketing, personnel, legal not manufacturing, distribution, wholesaling, or call centers
<b>Manufacturing</b>	Principle business is fabricating or processing of tangible property for resale
<b>Data Centers</b>	Building or buildings, either newly constructed or remodeled, housing high-tech computer systems and related equipment
<b>Warehouse &amp; Distribution</b>	Storage or distribution of finished tangible personal property. Does not include a location where tangible personal property is processed, manufactured, sold to customers or assembled
<b>Call Centers</b>	Uses telecommunications in customer service, soliciting sales, reactivating accounts, surveys or research, fundraising, collecting receivables, reservations, taking or receiving orders

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## ENHANCED JOB TAX CREDIT

Tennessee counties designated as **Tier 2** and **Tier 3** Enhancement Counties are entitled to the Standard Job Tax Credit and an additional annual Enhanced Job Tax Credit.

■ Tier 1 Enhancement Counties: \$4,500 job tax credit with 15-year carry forward

■ Tier 2 Enhancement Counties: \$4,500 job tax credit with 15-year carry forward plus additional 3 years at \$4,500 per year with no carry forward

■ Tier 3 Enhancement Counties: \$4,500 job tax credit with 15-year carry forward plus additional 5 years at \$4,500 per year with no carry forward

NOTE: Job Tax Credit may be applied against a company's franchise and/or excise tax liability. To qualify for the Job Tax Credit, a company must create 25 net new full-time jobs and increase capital investment by \$500,000 in a qualified business enterprise within a 36-month period.

16



10

Public Universities

27

Colleges of Applied Technology

13

Community Colleges

75

Tennessee Career Centers and affiliated sites

\$10M

In grants awarded to regional partnerships to fill skill gaps in 2014

35

Independent Colleges and Universities

411,749

People enrolled in college in 2013

63,911

Graduates with an Associates Degree or higher in 2013

17

## DRIVE TO 55

One of Governor Bill Haslam's key policy objectives is to ensure 55% of Tennesseans hold a post-secondary degree or certificate by 2025.

### Tennessee Promise

Beginning in Fall 2015, high school graduates can attend a community college or college of applied technology absolutely free of tuition and fees

### Tennessee Reconnect

Allows adults to complete their post-secondary credential by attending one of our 27 Tennessee Colleges of Applied Technology completely free of tuition and fees

### Tennessee LEAP

Ensures our post-secondary institutions are producing the skills and credentials that Tennessee employers actually need by identifying and filling skill gaps across the state



## Drive to 55

- Governor Haslam initiated the Drive to 55 programs with a mission of having 55.0% of Tennessee's working age adult population equipped with a college degree or certificate by 2025.

No. Tennesseans (Age 25-64) by Highest Credential	2012	2013	2014	2015
Certificate	136,630	136,794	137,530	138,304
Associate's	250,219	257,289	256,817	260,210
Bachelor's	583,335	582,617	605,594	616,128
Graduate or professional	300,693	317,495	315,247	322,939
<b>Total</b>	<b>1,272,877</b>	<b>1,294,249</b>	<b>1,315,188</b>	<b>1,377,581</b>
% of population age 25-64 with a postsecondary credential	37.3%	37.8%	38.3%	38.7%

## Drive to 55



- 16,291 Students Enrolled in Fall, 2015
- 1700 TCAT Students, 94.7% Retention Rate
- 3,500 Students Enrolled in TCATs Fall, 2016
- Nearly 5,000 Adults Enrolled in Fall 2015
- Some college, no degree:
  - 105,000 are over 50% complete
  - 25,000 may have enough credit hours to graduate

## Counties Served by LEAP



1,591 HS Students in LEAP Courses

630 PS Students in LEAP Courses

13,363 Total Students Touched

## WORKFORCE360°



## CENTER FOR ECONOMIC RESEARCH IN TENNESSEE

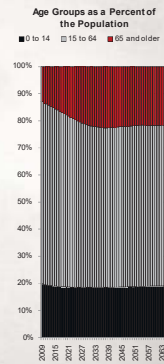


## AGE DEMOGRAPHICS

Dependency ratios were a second index component, reflecting the share of population age 15-64 relative to young & old dependents.

Retirements driven by the baby boomer cohort represent a disruptive trend for organizations. Businesses may have greater incentive to adopt technologies that automate workforce tasks. Education will need to rise to fill vacancies created as the baby boomer generation retires.

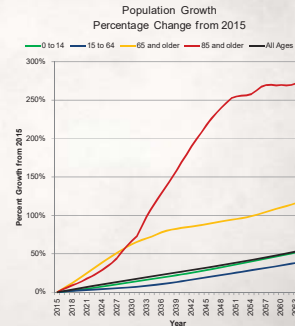
- Pressure on the working age population will rise.
- Population under age 15 is projected to remain around 19% of the total population until 2064.
  - Working age population will decline from 67% of population to 59% by 2032, where it will remain until 2064.
  - The senior population (age 65+) will grow from 13% of the population to 22% by 2032, where it will remain until 2064.



Sources: CBER's Population Projections; U.S. Census Bureau

## POPULATION GROWTH

- The number of individuals aged 85+ in Tennessee is expected to triple from 2010 to 2040.
- The working age population (15 to 64) is projected to grow at a slower rate than the total population - 14% from 2015 to 2040 and 39% from 2015 to 2064.
- The retirement age population (age 65 and older) is projected to grow at a much higher rate than the total population - 84% from 2015 to 2040 and 118% from 2015 to 2064.



Sources: CBER's Population Projections; U.S. Census Bureau

## 2015 ANNUAL LEAP REPORT

Tennessee Labor Education Alignment Program (LEAP) is a \$10M grant opportunity designed to ensure postsecondary institutions are producing the skills and credentials that Tennessee employers actually need through alignment of education and industry.

**STEM and STEM-Related Occupations:** Science, Technology, Engineering and Math (STEM) occupations in Tennessee are projected to have many openings and are high wage jobs.

**IT (Computer) Occupations:** Computer occupations are projected to grow rapidly and have high wages. These occupations include computer scientists, system analysts, software and web developers, etc.

**Industry Concentration:** Many of the occupations in the LEAP report have a high concentration of employment within the following industries:

- Health Care and Social Assistance
- Professional, Scientific and Technical Services
- Manufacturing
- Finance and Insurance
- Wholesale Trade
- Information
- Education Services
- Construction
- Transportation and Warehousing
- Retail Trade

TN Department of Economic & Community Development

## 2015 ANNUAL LEAP REPORT

Drive to 55 is not just a mission for higher education, but a mission for Tennessee's future workforce and economic development.

**Retirement Age Demographics:** Retirements of the baby boomer generation have significant impacts on the workforce nationwide. Workers age 55 and older are nearing retirement age over the next decade, and it will be important that when these talented workers choose to retire the workforce is prepared to fill the gaps created.

Tennessee has a skills gap in several occupations that also have a relatively high share of workers age 55 and older:

- Tool and Die Makers
- Production, Planning and Expediting Clerks
- Industrial Engineers
- Operations Research Analysts
- Maintenance and Repair Workers, General
- Information Security Analysts
- Heavy and Tractor Trailer Truck Drivers
- Medical and Clinical Laboratory Technologists
- Medical Equipment Repairers
- Healthcare Social Workers
- First-Line Supervisors of Mechanics, Installers and Repairers

TN Department of Economic & Community Development

## TENNESSEE WORKFORCE DISRUPTION INDEX

1.4 Million (50%) of Tennessee's current jobs have a high probability of automation



The map above shows the percent of jobs that are vulnerable to automation in each county.

**Occupation groups with greatest share of vulnerable jobs:** 1) Food preparation and serving occupations—91.8% of TN jobs are vulnerable 2) Sales occupations—76.8% 3) Production occupations—76.3% 4) Transportation and material moving occupations—73.2% 5) Office and administrative support occupations—66.0% 6) Construction and extraction 62.9%

**Lower-wage occupations are more vulnerable to replacement by automation:** The average hourly wage of jobs with a high probability (70 percent or higher) of automation is \$14.56, five dollars lower than the average hourly wage for all jobs.

TN Department of Economic & Community Development

## TENNESSEE WORKFORCE DISRUPTION INDEX

**37% of the wages of Tennessee workers could be lost:** If automation occurred in the occupations with a high probability of automation, 37 percent of the wages of workers in Tennessee could be lost.

The three counties with the highest percent of expected lost wages are Bedford—49%, Sevier—48%, and Henderson—47%.

**Dependency Ratios:** Accelerated rates of retirements currently driven by the baby boomer cohort represent a highly disruptive trend for organizations.

Cumberland—78%, Clay—69% and Loudon—69% have the highest dependency ratios—the ratio of the dependent population to the working age population (age 15 to 64).

**Educational Attainment:** Educational attainment will improve or prevent the ability of a workforce to manage and align with automation.

Lake—9%, Hardeman—13% and Morgan—14% have the lowest attainment of an Associate's degree or higher for the population age 25 to 64.

**Rural counties are more vulnerable to the disruptive effects of automation:** Of Tennessee's 17 urban counties, only three—Hamblen, Loudon, and Bradley—are ranked in the most vulnerable two-thirds of Tennessee counties.

TN Department of Economic & Community Development

## Educational Attainment

Educational attainment was the third index component: the percent of population age 25-64 with an Associate's degree or higher.

Educational attainment will improve a community's ability to manage and align with automation; to complement and take advantage of automation.

### Automation will disrupt the workforce landscape – not replace it.

- Greater demand for critical thinking, judgment, human perception, creativity, social intelligence
- Technology can complement labor, and boost productivity, incomes, leisure time

### Tennessee is on the right track.

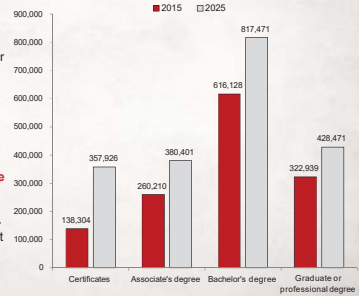
- Based on projections that 55% of future jobs will require postsecondary education, Tennessee's Drive to 55 mission is to ensure 55% of our workforce holds a postsecondary credential by 2025.
- Tennessee has become the leading state in the nation for high school seniors completing the Free Application for Federal Student Aid (FAFSA), with 68% of the 2015 class submitting the form.



## ECONOMIC BENEFITS OF POSTSECONDARY DEGREES

**68% of the 2015 Class Completed the FAFSA:** Tennessee has become the leading state in the nation for high school seniors completing the Free Application for Federal Student Aid (FAFSA), with 68% of the 2015 class submitting the form.

**10.1% Increase in First-time Freshman Enrollment at Public Institutions:** Tennessee increased its first-time freshman enrollment at public institutions by 10.1% between Fall 2014 and Fall 2015.



## ECONOMIC BENEFITS OF POSTSECONDARY DEGREES

**\$9.3 Billion in Additional Income Annually to Tennessee's Workforce:** An estimated 528,630 additional certificate or degree holders will work in Tennessee upon achievement of 55 percent postsecondary attainment by 2025. These workers are projected to earn \$9.3 billion more in additional income annually than that which would have been generated without a postsecondary credential.

**Incremental Income Boost with Postsecondary Attainment:** On average, a high school graduate in Tennessee could earn \$5,941 more per year with a certificate or an associate's degree, \$18,860 more per year with a bachelor's degree and \$30,949 more per year with a graduate or professional degree in 2015.

Median Earnings by Level of Education in Tennessee	
Level of Educational Attainment	Median Earnings (in 2015 dollars)
Less than high school graduate	\$19,035
High school graduate (includes equivalency)	\$26,365
Some college or associate's degree	\$32,306
Bachelor's degree	\$45,225
Graduate or professional degree	\$57,314



**THANK YOU**  
State of Tennessee Department of Economic & Community Development

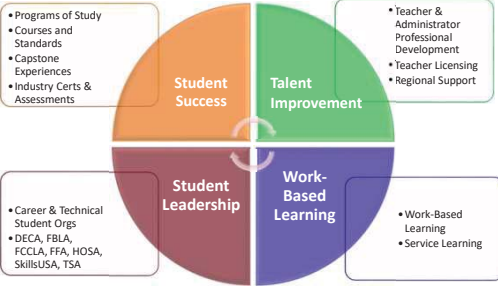
[Twitter.com/TNECD](#)
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[LinkedIn.com/TNECD](#)



## Secondary CTE in Tennessee

Candi Norwood, Director of Student Success  
Office of CTE, Division of College, Career & Technical Ed


### SECONDARY CTE IN TN



- Student Success:**
  - Programs of Study
  - Courses and Standards
  - Capstone Experiences
  - Industry Certs & Assessments
- Talent Improvement:**
  - Teacher & Administrator Professional Development
  - Teacher Licensing
  - Regional Support
- Student Leadership:**
  - Career & Technical Student Orgs
  - DECA, FBIA, FCCLA, FFA, HOSA, SkillsUSA, TSA
- Work-Based Learning:**
  - Work-Based Learning
  - Service Learning

TN Department of Education Career Forward Task Force

### SECONDARY CTE IN TN




- Student Success:**
  - Programs of Study
  - Courses and Standards
  - Capstone Experiences
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  - Work-Based Learning
  - Service Learning

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### CTE IN THE PAST

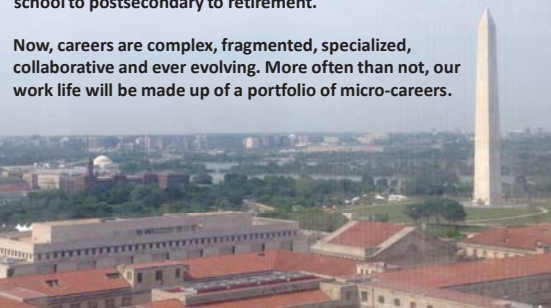
- Strictly Skills-Based
- Programs of Study may not match regional opportunities
- Minimal Focus on Postsecondary Opportunities
- Students deemed not going to "College" were placed in these classes



TN Department of Education Career Forward Task Force


In the past, careers were stable, linear and singular. People chose one path and pursued it over the course of their lives from high school to postsecondary to retirement.

Now, careers are complex, fragmented, specialized, collaborative and ever evolving. More often than not, our work life will be made up of a portfolio of micro-careers.



TN Department of Education Career Forward Task Force 5

### TODAY'S CTE IS NOT YOUR OLD VOCATIONAL EDUCATION



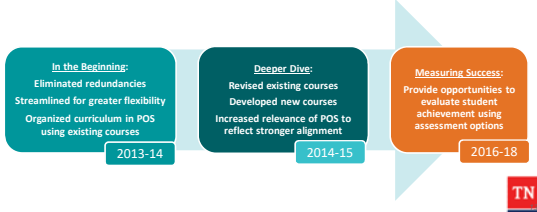
TN Department of Education Career Forward Task Force 6






## MULTI-PHASED, MULTI-YEAR APPROACH

Phase	Goal	Implementation
Phase I	Streamline our existing courses and programs of study	2013-2014 SY
Phase II	Add relevant new courses and new programs of study, revise courses to align to higher student expectations	2014-2015 SY
Phase III	Measure success of students with rigorous assessment options for all courses	2016-2018 SY



## GOING FORWARD

- Shared CTE Programs of Study: High School – TCAT/ Community College
- Course/Student Assessment Opportunities: All Levels
- Continued Growth of Capstone Certifications
- Continued Growth in Early Postsecondary Credit Opportunities
- Continued Growth in Industry Partnerships and Work-Based Learning



## TENNESSEE'S MODEL FOR WORK-BASED LEARNING

Chelsea Parker, Exec Dir, Work-Based Learning and TN Council for CTE  
Blake Shearer, Coord. HS Interventions-Transitions

### WHAT IS WORK-BASED LEARNING (WBL)?

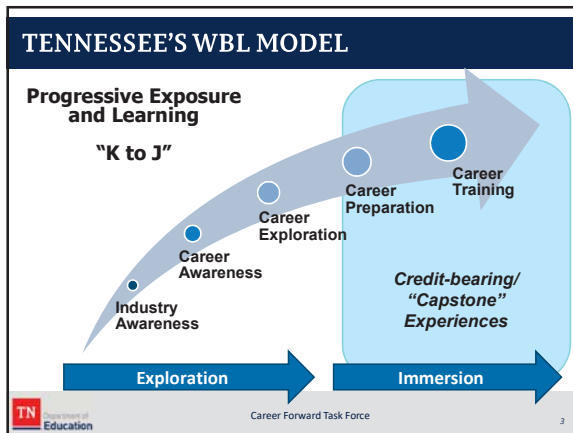
Work-based learning (WBL) is a proactive approach to bridging the gap between high school and high-demand, high-skill careers in Tennessee.

Students build on classroom-based instruction to develop employability skills that prepare them for success in postsecondary education and future careers.

WBL activities must:

- **Begin in elementary** and continue through postsecondary
- **Align with student interests**
- **Expose students** to professional work settings and expectations
- Provide students with **feedback on their work/performance** from industry professionals

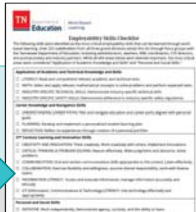
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### TRANSFERABLE EMPLOYABILITY SKILLS

<b>Academic &amp; Technical Skills</b>	<ul style="list-style-type: none"> <li>• Literacy, Math, and Technical Skills</li> <li>• Workplace Safety</li> </ul>
<b>Career Knowledge &amp; Navigation Skills</b>	<ul style="list-style-type: none"> <li>• Understanding career paths</li> <li>• Planning and goal setting</li> <li>• Reflection</li> </ul>
<b>21<sup>st</sup> Century Learning &amp; Innovation Skills</b>	<ul style="list-style-type: none"> <li>• Creativity and innovation</li> <li>• Critical thinking and problem solving</li> <li>• Communication</li> <li>• Collaboration</li> <li>• Information literacy</li> <li>• ICT: technology literacy</li> </ul>
<b>Personal &amp; Social Skills</b>	<ul style="list-style-type: none"> <li>• Initiative</li> <li>• Professionalism, Ethics, and Interpersonal Skills</li> <li>• Cultural and global competence</li> <li>• Adaptability and flexibility</li> <li>• Productivity</li> </ul>

**Employability Skills Checklist**



Career Forward Task Force

### ENSURING A SUCCESSFUL WBL MODEL

<b>Approach Taken</b>
Statewide Assessment of Previous WBL (225 participants, including over 75 from industry)
2014-2015 Development and Pilot of NEW Policies and Standards <ul style="list-style-type: none"> <li>• Revisions to SBE Rules and Policies</li> <li>• Revision to TDOE WBL Policy Manual</li> <li>• Development of WBL-related Courses and Standards</li> </ul>
2015-2016 Full Roll Out <ul style="list-style-type: none"> <li>• Developed and Launched NEW PD</li> <li>• WBL Leadership Council – Expert Practitioners/Trainers</li> <li>• WBL 2-Day Certification Training – Offered in all Grand Divisions</li> <li>• WBL PLCs – Promote continuous improvement in every CORE region, monthly</li> </ul>
Spring 2016 Assess District Readiness for WBL <ul style="list-style-type: none"> <li>• All Means All approach to WBL course offerings</li> <li>• Teachers are supported by appropriate PD</li> <li>• 2016-17 WBL Portfolio Pilot</li> </ul>

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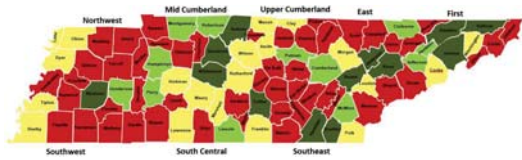
### ALL MEANS ALL IN WBL

**Tennessee's Vision for WBL:** "Every student in Tennessee will prepare for further education and long-term careers in an increasingly complex global economy by exploring careers, understanding their own skills and interests, and learning through hands-on application of valuable employability skills."

<b>WBL Readiness</b>	<b>WBL Readiness Indicators</b>
<b>"All Means All" WBL Course Offerings</b>	Districts offer a full suite of capstone WBL courses, making it available to all (course codes 6105 and 6107, but may also include other practicum courses)
<b>Teachers are Supported</b>	Teachers have attended BOTH the foundational WBL two-day training and have attended 4+ WBL PLCs in a given school year to support continuous improvement of their programs
<b>Districts Plan for Continuous Improvement</b>	Districts have a Continuous Improvement plan for WBL that addresses all identified key components of a WBL plan
<b>Students Demonstrate Growth</b>	Using multiple measures, students demonstrate growth in employability skills (use of pre- and post-assessments of employability skills) Portfolio rubric assessment shows student growth and meets benchmark attainment goals

Career Forward Task Force

## WBL READINESS BY DISTRICT



- District offers multiple capstone WBL options to all students
- District offers capstone WBL accessible to all students
- District offers multiple capstone options, but not available to all students
- District offers one or fewer capstone WBL options to only a portion of students

## EVALUATION METRICS

- IF quality WBL is grounded in district/school culture that supports career readiness for all students, and
- IF quality WBL is meaningful and progressive, allowing students to progress from an early age, then
- Quality WBL will be measurable by:
  - Pre- and Post- Experience/Exposure Assessments
  - Professional Development/Teacher Supports
  - Early Student Experiences – tracked/captured
  - Student Portfolios Demonstrating Student Growth
  - ROI and Industry Partner Participation Evaluations



The Tennessee Colleges of Applied Technology serve as the premier suppliers of workforce development throughout the State of Tennessee. The Colleges fulfill their mission by:

- Providing competency-based training through superior quality, traditional and distance learning instruction methods that qualify completers for employment and job advancement;
- Contributing to the economic and community development of the communities served by training and retraining employed workers;
- Ensuring that programs and services are economical and accessible to all residents of Tennessee; and
- Building relationships of trust with community, business, and industry leaders to supply highly skilled workers in areas of need.



There are 27 Tennessee Colleges of Applied Technology strategically located within a 50 mile radius of every Tennessee resident.



## Who We Serve

- TCATs train **30,000** students each year
- Approximately **10,000** full-time day students
- Approximately **10,000** Part-time students
- Approximately **10,000** Special Industry students



## Tennessee Colleges of Applied Technology (TCATs)

- 60 Occupational Program Options Statewide
- Program Length: 4 months – 2 years
- Open Entry/Open Exit
- Students Choose:
  - Program
  - Full-time Day or Evening Enrollment

**Completion:** 82.1% **Placement:** 87.1% **Licensure:** 94.3%



## Awards

- **Diploma** are awarded to students who successfully complete an occupational program which is at least one year in length.
- **Certificates** are awarded to students who successfully demonstrate competencies for a proficiency level in occupational programs less than one year in length.



## The Drive to 55

- Tennessee Promise
- Tennessee Reconnect
- Tennessee LEAP
- Dual Enrollment



## Tennessee Promise

### Fall 2015

2,136 Students Enrolled

### Spring 2016

2,022 Students Returned

95% Fall to Spring Retention Rate



## Tennessee Reconnect

### Fall 2015

4,921 Students Enrolled

### Spring 2016

4,479 Currently Enrolled

91% Fall to Spring Retention Rate



## Dual Enrollment

### Fall 2014

2,202 Dual Enrollment Students

### Fall 2015

3,307 Dual Enrollment Students

33% Fall to Fall Increase

45% Five year Increase



## Partnerships with Secondary CTE

### Early Postsecondary Initiatives

- Industry Certification Alignment
- Dual Enrollment Pilot Expansion
- Dual Credit Expansion

### Barriers

- Transportation
- Capacity
- Equipment
- Funding



## Strategic Initiatives

### New Student Information System

- Business Process Modeling
- Data Improvement and Sharing Opportunities

### Capacity Plan

- Campus /Program Expansions

### Program Review

- Length
- Alignment





For TCAT contact information, please visit:  
<https://www.tbr.edu/institutions/colleges-applied-technology>

## Contact

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Chelle Travis  
Assistant Vice Chancellor for Student Services  
Tennessee Colleges of Applied Technology  
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[Chelle.Travis@tbr.edu](mailto:Chelle.Travis@tbr.edu)



# TENNESSEE COMMUNITY COLLEGES

Michael Tinsley  
Perkins Coordinator  
Tennessee Board of Regents



## COMPLETE COLLEGE TENNESSEE ACT AND THE DRIVE TO 55

- Reduce the cost to completion
- Reduce the time to completion
- Better aligned credentials with employer needs



## COMPLETE COLLEGE TENNESSEE ACT AND THE DRIVE TO 55

- A) Remediation Redesign
- B) Academic Alignment
- C) Structured Intervention



## COMPLETE COLLEGE TENNESSEE ACT AND THE DRIVE TO 55

### *Remediation Redesign*

- Seamless Alignment and Integrated Learning Support (SAILS)
- Co-Requisite mediation (remediation redesign)



## COMPLETE COLLEGE TENNESSEE ACT AND THE DRIVE TO 55

### *Academic Alignment*

- Tennessee Transfer Pathways (50 articulated pathways)
- Career Program Alignment
- Reverse Articulation



## COMPLETE COLLEGE TENNESSEE ACT AND THE DRIVE TO 55

### *Structured Intervention*

- Tennessee Promise
- Tennessee LEAP
- Intrusive Advising





### Community College Completion Facts

**PART-TIME vs FULL-TIME**  
 55% of CC students are part-time  
 A majority of community college students attend part-time, representing 55% of community students. It takes them longer to complete.

**COLLEGE READINESS**  
 60% of CC students unprepared  
 Community colleges are open access, meaning many students who are unprepared for college. According to a national survey by the University of Tennessee, only 40% of freshmen demonstrate learning readiness.

**SIX-YEAR GRADUATION RATES**  
 When the threshold is extended to six years, community college completion rates are considered low.  
**41%** All Students  
**62%** Full-time Students

**94** Completion rate for certificate-seeking students.

**90** More than 90 percent of adult students graduate with learning transfer or credit mobility.

**93** Percentage of AA degree students who graduate with a transferable degree.




## Career Forward Task Force

### Agenda

May 25, 2016

*Light Breakfast - (Optional) starting at 8:15am*

- |       |   |            |
|-------|---|------------|
| I.    | <i>Review of Key Discussions &amp; Overview of Today</i><br>Dr. Candice McQueen<br>TN Commissioner of Education   | 8:30 a.m.  |
| II.   | <i>The Life of a Ready Student: What We Know and Don't Know</i><br>Jonathon Attridge<br>Division of Data & Research, TDOE   | 8:45 a.m.  |
| III.  | <i>Break</i>  | 9:30 a.m.  |
| IV.   | <i>Programs, Assessments and Supports: Towards a Ready Student</i><br>(Readiness Series, Part II)<br>Dr. Nakia Towns, Asst Commissioner Data & Research, TDOE<br>Debra Lyons, Sr. Dir., Workforce Advancement, ACT<br>Casey Haugner Wrenn, Exec. Dir. Early Postsec & Student Readiness, TDOE | 9:45 a.m.  |
| V.    | <i>Student Panel: One Year Out – Student Preparation and Transition</i><br>Facilitated by: Commissioner McQueen   | 10:45 a.m. |
| VI.   | <i>Lunch Break</i>  | 11:30 a.m. |
| VII.  | <i>Small Group Discussion</i>   | 12:00 p.m. |
| VIII. | <i>Circling Back</i><br>Commissioner McQueen  | 12:55 p.m. |
| IX.   | <i>Dismissal</i>  | 1:00 p.m.  |




## CAREER FORWARD TASK FORCE

May 25, 2016


### CHARGE: CAREER FORWARD TASK FORCE

- Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
- Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.

 Career Forward Task Force
2


### GUIDING QUESTIONS

1. How do we know when a student is “career ready” at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state's economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

 Career Forward Task Force
3


### HIGH LEVEL TAKEAWAYS - SO FAR

- “Career Ready” must be meaningful, rigorous and relevant for students and must align with employer needs and occupational opportunities.
- Employer engagement in a student's learning lifecycle must be robust and diverse, enhancing and assuring what occurs in the classroom and vice versa.
- There are multiple learning models, approaches and experiences that can inflect the development of ready student. But which ones are the right ones, and how should they be promoted? *(We will hear and learn of more today.)*
- Federal legislation can be a game changer for states who commit to leveraging shared focuses.
- Student readiness measures can't predict student success if they are not aligned process-wise and outcome-wise.

 Career Forward Task Force
4

### FOCUS OF MAY GATHERING

- I. THE LIFE OF A READY STUDENT: WHAT WE KNOW AND WHAT WE DON'T KNOW
- II. STUDENT PROGRAMS, ASSESSMENTS AND SUPPORTS (Readiness Series)
- III. STUDENT PANEL
- IV. LUNCH BREAK
- V. SMALL GROUP DISCUSSION: PREPAREDNESS, READINESS, SUCCESS (What is going well? What is missing? What can be better?)
- VI. CIRCLING BACK & DISMISSAL

 Career Forward Task Force
5

### AREAS OF FOCUS/REMAINING MONTHS

**March:**  
Kickoff: focused on Charge and Setting the Stage; high level review of Interconnectedness of Education, Industry, and Career Choices

**April:**  
Review of Federal Acts and State Approaches around Education, Labor and Industry; Begin defining a “Ready Student” by review of TN's secondary/postsecondary CTE and Work-Based Learning


**May:**  
Defining a “Ready Student,” using Data; Approaches Used to Move a Student to Readiness; Student Voices on Readiness and Transitions

**June**  
Structures and Systems: existing Strengths, Alignments, Barriers, Gaps, Culture/ Perceptions, Plans and Models of Practice at Local, Regional, State Levels; Defining a *College and Career Ready Student*

**July:**  
ROI of Education-Industry Partnerships, New Approaches to Data Collection, Evaluation, and Assessment to Ascertain “Ready Student;” Sustainability Issues

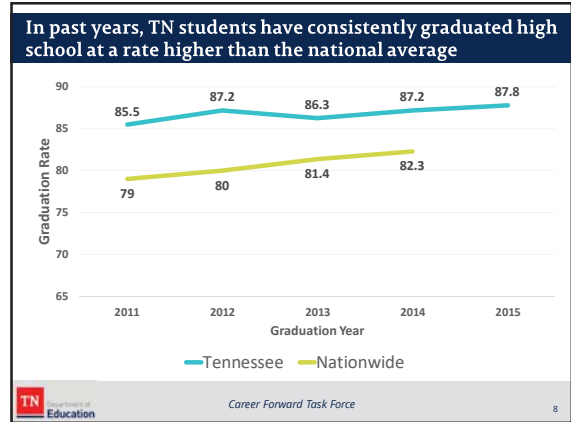
**August:**  
Discuss Identified Overarching Principles and Recommendations; Gain Sign Off

 Career Forward Task Force
6



## TRACKING STUDENT TRAJECTORIES OVER TIME

Jonathon Attridge | Research and Strategy Office | May 25, 2016



Despite successfully moving through high school, TN's students are less likely than peers to enroll in postsecondary

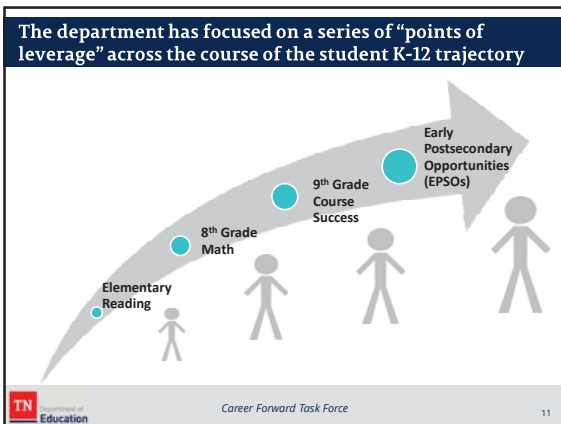

- Tennessee lags behind the nation in college matriculation following high school graduation
  - Tennessee: 58% of the 2014 graduates
  - Nation: 66% of the 2014 graduates
- We have seen promising increases in the 2015 class
  - Tennessee: 62.5% of the 2015 graduates (+4.5%)
  - Nation: 69.2% of 2015 graduates (+3.2%)
- New ECD report highlights economic advantage
  - Relative to high school graduate, an associates degree holder earns \$5,941 more per year and a bachelor's degree holder averages \$18,860 more per year

Career Forward Task Force

TODAY'S PLAN

- College and Career Readiness is the progression that begins at home and develops as students progress through secondary into postsecondary into the workplace.
  - Keeping students **on track**
  - **Catching up** students who fall behind

Career Forward Task Force

## THE CHALLENGE OF ELEMENTARY READING IN TENNESSEE

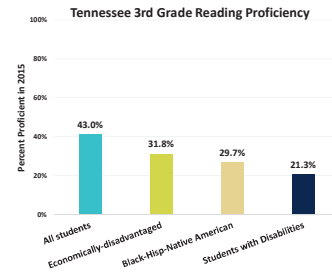
## CHECKPOINT #1: THIRD GRADE READING

The majority of Tennessee students are not reaching reading proficiency by the end of third grade, and far too few of those students who have fallen behind catch back up over time.

## Checkpoint #1: Overall reading proficiency in Tennessee is low and achievement gaps are strikingly large

Fewer than half of all third graders read on grade level.

This number has not increased since 2010.



## While students can gain back lost ground with strong instruction, we are seeing too little catch-up in later grades

Less than **3 percent** of the almost 6,000 students rated below basic in ELA in 3<sup>rd</sup> grade attained proficiency by the end of 5<sup>th</sup> grade.

Only **8 percent** of 8<sup>th</sup> graders below grade level in Reading reach the ACT college-ready benchmark.



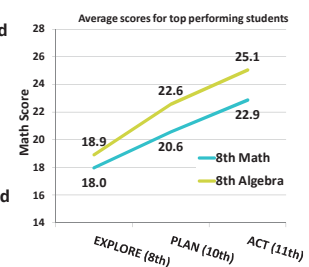
## EIGHTH GRADE MATH

## CHECKPOINT #2: MATH COURSE TRAJECTORIES

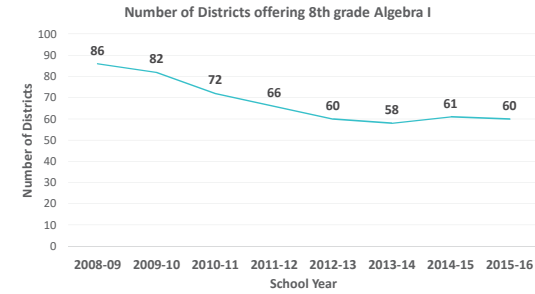
The opportunities that students have in 8<sup>th</sup> grade course-taking directly affect later course trajectories and academic success, but most districts aren't offering prepared students the opportunities in math that will pay off later on.

## 8<sup>th</sup> grade Algebra I impacts achievement and future course options

- Seventy percent of the students taking advanced mathematics courses (above Algebra II) took Algebra I in 8<sup>th</sup> grade
- Similarly achieving students who took Algebra I instead of 8<sup>th</sup> grade math outperformed their peers on Explore. This gap increases over time



**But most prepared students do not have the opportunity to take Algebra I in 8<sup>th</sup> grade**

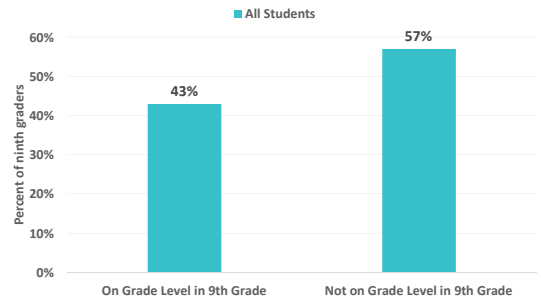


**NINTH GRADE READINESS**

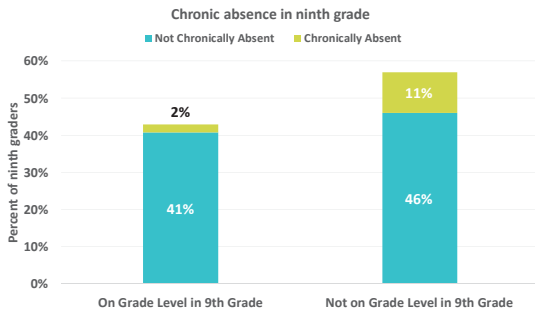
**CHECKPOINT #3: NINTH GRADE READINESS**

**By ninth grade, student success in core ninth grade courses is highly predictive of high school and postsecondary student pathways**

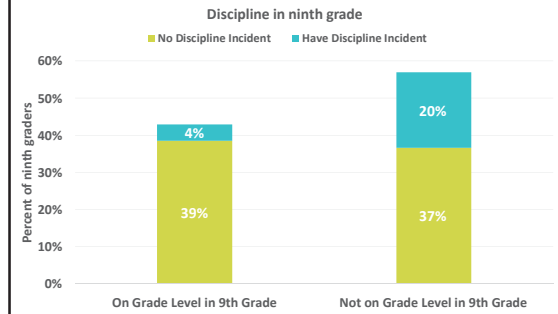
**Checkpoint #3: By 9<sup>th</sup> grade, course taking patterns can identify students who display signs of disengagement**



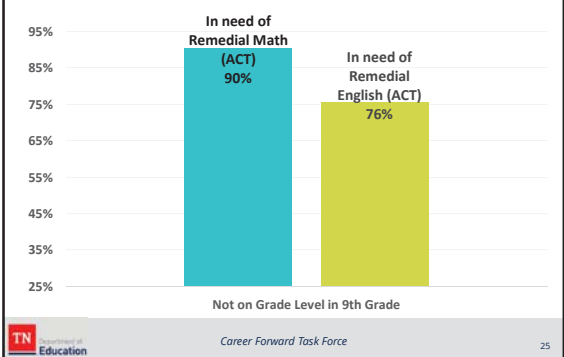
**Checkpoint #3: By 9<sup>th</sup> grade, course taking patterns can identify students who display signs of disengagement**



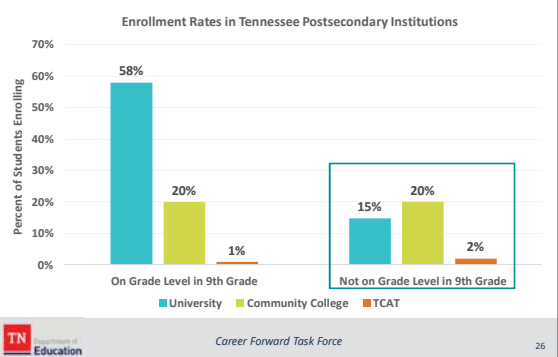
**Checkpoint #3: By 9<sup>th</sup> grade, course taking patterns can identify students who display signs of disengagement**



**Nearly all students who were behind in 9<sup>th</sup> grade also perform poorly on the ACT**



**These students also enroll in postsecondary institutions at startlingly low levels at all levels**



**EARLY POSTSECONDARY OPPORTUNITIES**

**The following five courses are the most common EPSOs in Tennessee**

	IB, (13 recognized schools)	Local Dual Credit	Statewide Dual Credit	Advanced Placement	Dual Enrollment
Description	Courses offered at high schools that are authorized IB schools	High school courses that are aligned to standards at local/partner PS institutions	High school course aligned to statewide PS standards with required challenge exam.	College board developed courses and exam offered in multiple subjects that are college level	Postsecondary course taught at PS institution, high school, or online
Structure	Course and Exam	Course and Exam	Course and Exam	Course and Exam	Course
Postsecondary Credit Determinant	IB SL or HL exam scores	Challenge exam score	Challenge exam score	Exam score	Course completion
Postsecondary Credit Award	Individual institutions (Not available)	Only partner institutions (Not available)	All TN public PS institutions	Individual institutional decisions	All TN public PS institutions

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**CHECKPOINT #4: EPSOs**

Despite widespread access, too few students are taking advantage of Early Postsecondary Opportunities. Less than half of "College Ready" students earn an EPSO credit

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**Checkpoint #4: Too few students are taking EPSOs**

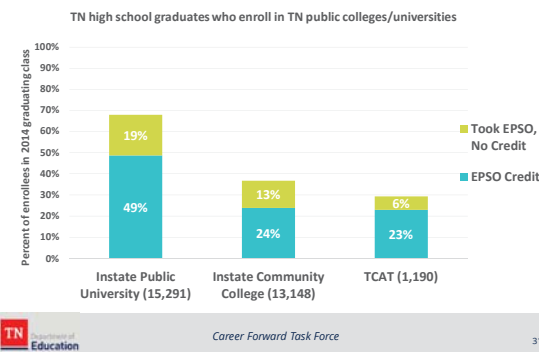
While 80% of high schools offer some early postsecondary opportunity, only 40% of students graduate high school with any early postsecondary credit

Only 55% of students who scored above ELA benchmark on PLAN attempted EPS course credit

Students who are not Economically Disadvantaged are over twice as likely to take an EPS course or exam

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## Half of public university enrollees matriculated with EPSO credits



## FINAL THOUGHTS

Proactively **keep students on track** and proactively identify students who are falling behind their peers and **provide personalized supports to catch up**.

Limited by what we know and don't know while provided with opportunities to break down barriers

- Focus on course access and course taking
- WBL/industry certifications
- Proxies for grit, persistence, soft skills

Readiness is not unidimensional

- Not working toward a discrete finish line

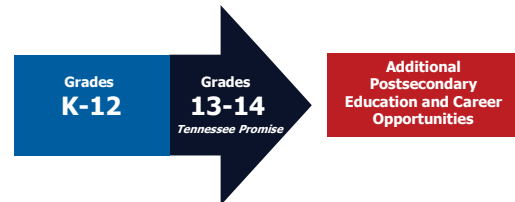
What systems and structures can we define to support ALL students in all schools throughout their education trajectory?



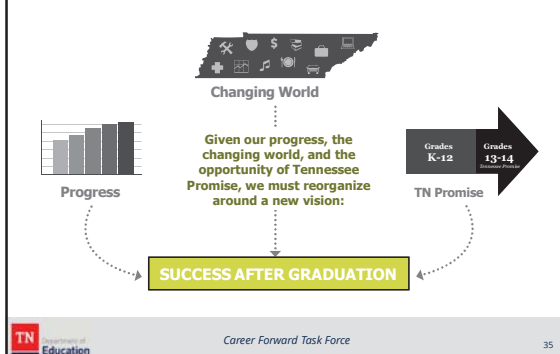
## STUDENT ASSESSMENTS

## Tennessee Promise Extends our Public Education System

### Free, Public K-14 System



## How do we ensure our students are on-track for success?



## TCAP Assessment Transition

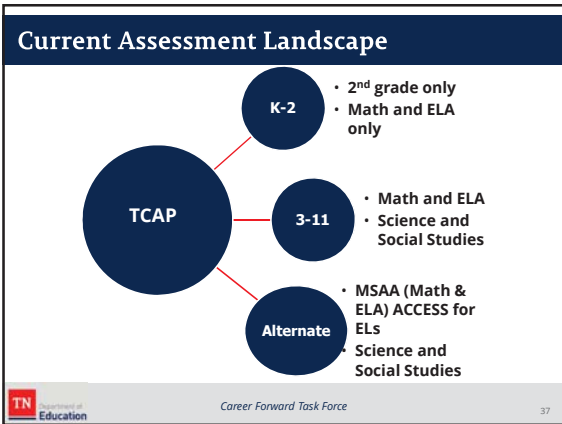
### Goals

- Better information about postsecondary readiness
- Full alignment to depth and breadth of standards
- Tennessee-specific test

### Key differences between old and new TCAP

- Variety of test item types to measure higher order thinking
- More rigorous expectations for proficiency
- Greater transparency via practice tools and assessment blueprints
- Option for online administration





- ### Current Assessment Landscape
- **Grade 2 (optional)**
    - ELA and Math
  - **Grades 3-11**
    - Math
      - Math 3-8
      - Algebra I, Geometry, Algebra II
      - Integrated Math I, II, III
    - ELA
      - ELA 3-8
      - English I, II and III
        - Writing incorporated in TNReady
  - **Grades 3-11 (continued)**
    - Science
      - Science 3-8
      - Biology, Chemistry
    - Social Studies
      - Social Studies 3-8
      - US History
  - **Alternate Assessments**
    - MSAA (ELA and math)
    - ACCESS for ELs
    - Science and Social Studies
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### Why is ACT/SAT an important measure of student performance in Tennessee?

- TNReady and ACT/SAT serve different purposes

TCAP EOC	ACT/SAT
<ul style="list-style-type: none"> <li>• Tennessee-specific annual test</li> <li>• Questions in multiple formats (i.e., multiple-select items, writing, and evidence-enhanced selected-response items),</li> <li>• Taken in two parts for ELA</li> <li>• Assesses depth of knowledge and understanding of grade-level or course</li> </ul>	<ul style="list-style-type: none"> <li>• National benchmark assessment for college and career readiness</li> <li>• Provides a snapshot of a student's K-12 academic career</li> <li>• Assesses students' cumulative knowledge from grades K-12</li> <li>• Survey level assessment consisting of multiple-choice tests including English, reading, mathematics and science reasoning</li> </ul>

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### Why is ACT/SAT an important measure of student performance in Tennessee?

ACT/SAT is an important metric to track our progress towards our strategic plan priorities

- TDOE Goals 2 & 3 reflect ACT/SAT performance
- TDOE Priority Area: Strategic High School Bridge to Postsecondary

This measure is important for students as a terminal assessment that provides a gateway to postsecondary institutions

- Admissions
- Scholarship eligibility
- Course placement decisions

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### Why is ACT/SAT in Accountability?

State law (T.C.A. 49-6-6001) effective July 1, **2007**:

- Districts are required to administer a postsecondary readiness assessment to **all eleventh grade** students
- Historically, Tennessee has administered the ACT as a measure to assess college readiness in the *eleventh grade*. SAT is an equivalent measure and also allowed

Graduation Rate has steadily increased, as ACT/SAT scores have been stagnant

- We must ensure that the **quality** of graduates – meaning the skills and competencies they demonstrate – is also improving
- Incorporating ACT/SAT in accountability is a strategy to ensure that we go **beyond credit attainment** as a culminating measure of K-12 education

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## STUDENT READINESS

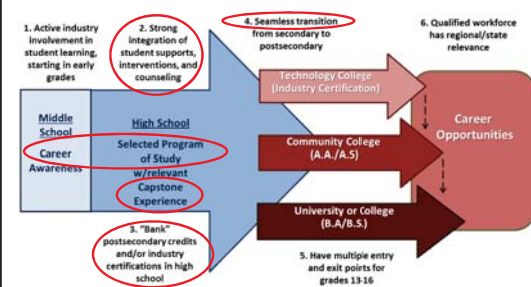
Casey Haugner Wrenn | College, Career and Technical Education | May 25, 2016

## OBJECTIVES

Taskforce members will understand the major components and strategies of our current pathway approach to supporting effective student K-14/16 transitions

- Student Planning
- Capstone Experiences
- Early Postsecondary Opportunities
- School Counseling
- Effective Student Transitions

## EFFECTIVE K-14/16 STUDENT PATHWAY



## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

1. Student Planning
2. Capstone Experiences
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## STUDENT PLANNING

### Where We Are:

- Official requirements for career interest inventories are listed in Tennessee Code Annotated and State Board Policy
- **T.C.A. § 49-6-412:** Requires all 6-9 grade students to take an interest inventory to "assist students in determining their interests and in making career decisions."
  - Specifically lists: Kuder, Myers-Briggs, ASVAB, EXLOPRE (ACT) and MyRoad (College Board)
  - Summary data is required annually to be sent to the state board to be used in curricula decisions
- **Tennessee State Board:** All students are required to have a **focused plan of study**, developed for high school prior to ninth grade. The plan should be reviewed annually using results from "various types of assessments."

## STUDENT PLANNING

### Comprehensive interest inventory resources available - sampling

- **ACT Profile:** free, high school resource
- **CollegeforTN.org:** free, customizable resource for all students
- **Kudor:** elementary through high school resource
- **ASVAB:** high school resource, military focus
- **Myers-Briggs:** personality inventory, not career-specific
- **MyRoad:** high school resource, free for students taking the PSAT/SAT

## STUDENT PLANNING

### Our Belief/Vision:

- Earlier career interest inventory and planning activities benefit students in middle school and high school
- Student Plans should be reviewed and updated annually to reflect changes in student interests, goals, and available opportunities
  - Revisiting the career interest inventory in high school would ensure students take advantage of appropriate elective courses, EPS courses and capstone activities

## STUDENT PLANNING

### Existing Challenges:

- Outdated and confusing language in code
  - Mismatch or unavailability of listed assessments
  - Does not encourage re-testing or revising of plans
- No funding at state level dedicated to non-cognitive testing
- Limited statewide guidance on how to incorporate student strengths, interests into high school planning
- Current state board policy may not reflect strongest practices:
  - Only requires planning to begin prior to 9<sup>th</sup> grade year (rather than earlier, to impact middle school course-taking) and end in 12<sup>th</sup> (rather than postsecondary)
  - No requirement to revise/update plan annually based on specific information (“review” is term used in policy)
  - No requirement to use consistent resource/assessment

## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

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## CAPSTONE EXPERIENCES

### Where We Are:

#### Tennessee State Board:

- High school policy “encourages” LEA’s to “consider requirements for students to complete a capstone experience”
- Graduating students are able to qualify for “state distinction”

**TN Department of Education:** Revision of (1) CTE courses and (2) CTE programs of study, (3) early postsecondary opportunity portfolio, and (4) work-based learning (WBL) framework over past 3 years has created the following:

- Clear expectations for culminating WBL or Practicum course (CTE, Special Education, General Education)
- Opportunities to earn aligned, transferable industry certifications
- Eight different ways to earn college credit while in high school

## CAPSTONE EXPERIENCES

### Our Belief/Vision:

- All districts should offer capstone experiences aligned with local and regional workforce opportunities and offered postsecondary programs
- All students graduate high school with more than just a high school diploma
  - Practice and demonstration of real world skills
  - Work-based learning
  - Early postsecondary opportunities
  - Industry certifications

## CAPSTONE EXPERIENCES

### Existing Challenges:

- Districts are not obligated to offer or require capstone experiences for all students
- Schools and/or districts are not rewarded/recognized for the number of students who complete capstone experiences
- Gaps exist in student capstone course taking patterns (ethnic background, socioeconomic status)
- Logistical and administrative barriers, such as transportation, funding and liability concerns
- Many students are not progressing fully along a learning pathway in order to be prepared for a capstone opportunity – perception is not for all students

## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

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## EARLY POSTSECONDARY OPPORTUNITIES

An early postsecondary opportunity (EPSO) is a course and/or exam that allows a high school student to obtain credits or hours recognized by a postsecondary institution

Early postsecondary opportunities allow students to:

- Become familiar with postsecondary expectations
- Develop confidence and skills for success in postsecondary
- Make informed postsecondary and career decisions
- Decrease the time and cost of completing a certificate, credential, or degree

## Early Postsecondary OPPORTUNITIES

- Dual Enrollment ————— Course ————— Local Institution
- Local Dual Credit ————— Course & Exam ————— Multiple Institutions
- Statewide Dual Credit
- Advanced Placement (AP)
- International Baccalaureate (IB)
- Cambridge International
- College Level Examination Program (CLEP)
- Capstone Industry Certification ————— Exam ————— Multiple Institutions

## EARLY POSTSECONDARY OPPORTUNITIES

### Where We Are:

- Tennessee students have greater access to postsecondary through *TN Promise*
- Research shows that students who participate in early postsecondary courses are more likely to enroll and persist in postsecondary

### Our Belief/Vision:

- All high schools offer a diverse **portfolio** of early postsecondary opportunities (EPSO) for students
- All students have an opportunity to earn postsecondary credits/hours or transferable industry certifications while in high school

## EARLY POSTSECONDARY OPPORTUNITIES

### What is a EPSO "Portfolio" approach?

- Offering a variety (3-4) of types every school year
- Options for all students, regardless of background, differentiated by:
  - Student interest and pathway
  - Student postsecondary aspirations
  - Student knowledge, skills and abilities
  - Student support needs (financial, access, transportation, etc.)

Example EPSO	Example Student Background & Goals
Advanced Placement (AP): Calculus	<ul style="list-style-type: none"> <li>• 4-year universities, STEM fields</li> <li>• Strong knowledge of college access and financial resources</li> </ul>
Dual Enrollment at local CC: College Algebra	<ul style="list-style-type: none"> <li>• Transfer pathways in TN 2- and 4-year schools, STEM and liberal arts fields</li> <li>• Knowledge of college access, financial resources</li> </ul>
Statewide Dual Credit: Pre-Calculus, Statistics	<ul style="list-style-type: none"> <li>• Transfer pathways in TN 2- and 4-year schools, STEM and liberal arts fields</li> <li>• Possibly limited knowledge of college access, financial resources</li> </ul>
Capstone Industry Certification Exams	<ul style="list-style-type: none"> <li>• Technical colleges and training programs</li> <li>• Desire to work while continuing their learning</li> </ul>

## EARLY POSTSECONDARY OPPORTUNITIES

### Existing Challenges:

- No uniform statewide EPSO acceptance policy across TN postsecondary systems/campuses
- Updating SBE uniform grading policy
- Limited funding for statewide EPSO expansion, piloting efforts
- Low numbers of eligible students taking advantage of EPSO courses/exams
- Low pass rates in some subjects
- Gaps in course- and exam-taking by student background
- Schools and districts are not required to offer or are being rewarded/recognized for EPSO offerings and pass rates
- Logistical and administrative barriers, such as transportation, funding and liability concerns

## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

1. Student Planning
2. Capstone Experiences
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5. Effective Student Transitions



## SCHOOL COUNSELING

### Where We Are:

Roles and responsibilities for school counselors are outlined in **T.C.A. § 49-5-302** and State Board of Education policy and rule.

State Board adopted counseling framework and standards have not been updated since 2005

Originally based on national model of school counseling from American School Counseling Association (ASCA)

Three domains of student development



HOW: needs, data

WHAT: Student planning, curriculum, services

IMPACT: evaluations, results

WHY: goals, standards



Source for graphic and more information:  
<http://schoolcounselor.org/fasca/media/fasca/ASCA%20National%20Model%20Template/ANMExecSumm.pdf>

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## SCHOOL COUNSELING

**Our Belief/Vision:** All schools have effective, comprehensive school counseling programs

Goal	Actions
Develop an Effective Communications Plan	<ul style="list-style-type: none"> <li>Launched <i>School Counselor Connection</i> bi-weekly digital newsletter</li> <li>Begin revision of state website content</li> </ul>
Create a School Counseling Advisory Council	<ul style="list-style-type: none"> <li>Announcement of Advisory Council in early March</li> <li>Advisory Council meetings in April, July, September of 2016</li> </ul>
Revise Tennessee Counseling Standards and Model of Practice	<ul style="list-style-type: none"> <li>Gathered counselor feedback from various meetings/conference</li> <li>Regional meetings to review first draft in April/May</li> <li>Prepare for State Board first reading in July, final reading October</li> <li>Training and rollout of new standards and model Fall 2016, Summer 2017</li> </ul>
Share Strong Practices from the Field	<ul style="list-style-type: none"> <li>School Counselor Spotlight in newsletter</li> <li>Test Anxiety Toolkit, FAFSA Frenzy Toolkit</li> <li>Collaborating with THEC to use CollegeforTN.org to house best practices</li> </ul>
Provide Robust Professional Development	<ul style="list-style-type: none"> <li>SCALI &amp; TCA</li> <li>Regional counselor collaboratives (launching this year in 2 regions)</li> <li>High School Counselor Mini-Conference, Institute for CTE Educators</li> </ul>



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## SCHOOL COUNSELING

### Existing Challenge: Student/Counselor Ratios

- Approximately **2,200** counselors working in **142** systems
- On average, each counselor serves about **465** students
- Schools are BEP funded at the following ratios:
  - Elementary grades (K-6): funded at 500:1
  - Secondary grades (7-12): funded at 350:1
- 75 districts have higher than recommended ratios
- ASCA recommends a ratio of 250:1**



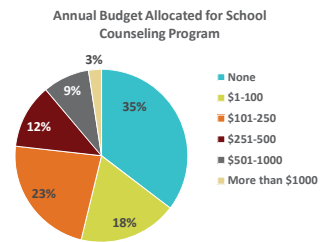
\*BEP handbook  
[http://www.tennessee.gov/asssets/entities/sbe/attachments/BEPHandbook\\_revised\\_March\\_2016.pdf](http://www.tennessee.gov/asssets/entities/sbe/attachments/BEPHandbook_revised_March_2016.pdf)

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## SCHOOL COUNSELING

### Existing Challenge:

- Not enough counselors to adequately support and advise students
- Most counselors receive little to no money to implement comprehensive support and advising programs



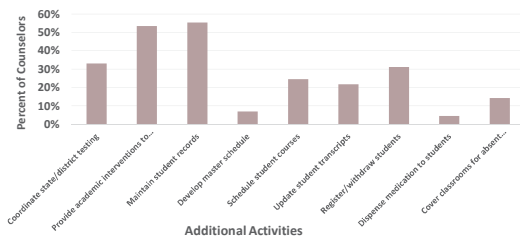
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## SCHOOL COUNSELING

### Existing Challenge: Non-counseling activities

Counselors report spending too much time on non-counseling responsibilities



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## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

- Student Planning
- Capstone Experiences
- Early Postsecondary Opportunities
- School Counseling
- Effective Student Transitions



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## EFFECTIVE STUDENT TRANSITIONS

### Where We Are:

- Only basic working definition of “readiness”
- Internal cross-divisional team to identify different approaches to determining if students are progressing appropriately
  - Identify important inflection points along K-13 pathway
  - Justify why these inflection points are important
  - Identify and define characteristics of a student at these points
  - Align data to assess current and predictive success of student
- Support districts in their support all students progressing and succeeding
- Available communications channels: report card, dashboards, integration with Response to Instruction and Intervention (RTI<sup>2</sup>) framework

## EFFECTIVE STUDENT TRANSITIONS

Multiple congruent efforts at TDOE that include expanding from academic standards only:

- Kindergarten readiness screener
- Early Literacy, 3<sup>rd</sup> Grade Reading Proficiency definition
- Expansion of RTI<sup>2</sup> Framework to RTI-B (behavior)
- Inclusion of literacy and “practice” standards into academic standards revisions
- Social and emotional learning
- School culture and climate
- Revision of school counseling standards

## Effective Student Transitions

### Our Belief/Vision:

- Ensure districts can support ALL students individually toward success and have tools to effectively assess needs and intervene appropriately
- Provide districts with guidance on how to identify and use their student data in order to better support student progression
  - Data-driven decision making methodology for each individual student that does not promote tracking or high-stakes gateways
- All stakeholders have clear understanding of an approach to success for students and how to get there

## EFFECTIVE STUDENT TRANSITIONS

Standard Area	Standard 1: Learning through discovery	Standard 2: Learning through inquiry	Standard 3: Learning through problem-solving	Standard 4: Learning through reflection
Instruction	... (text)	... (text)	... (text)	... (text)
Assessment	... (text)	... (text)	... (text)	... (text)
Instructional Materials	... (text)	... (text)	... (text)	... (text)
Professional Learning	... (text)	... (text)	... (text)	... (text)
Instructional Leadership	... (text)	... (text)	... (text)	... (text)
Instructional Practice	... (text)	... (text)	... (text)	... (text)
Instructional Support	... (text)	... (text)	... (text)	... (text)

## EFFECTIVE STUDENT TRANSITIONS

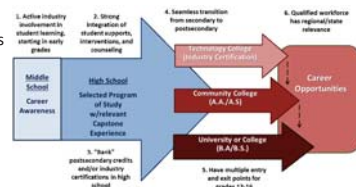
### Existing Challenges:

- No comprehensive statewide definition of student readiness or student success along K-13 pathway
- Lack of collected non-cognitive data (beyond attendance and discipline)
- Initiatives at TDOE at times are implemented separately with schools and districts, and are not integrative or leveraged to promote a more holistic student progression
- Districts lack robust and cohesive guidance and tools to assess, intervene or promote students appropriately
- Student progression is still leaving many qualified students behind – need better, clearer approaches to identifying student capabilities and interests beyond simply a test score

## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student

1. Student Planning
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## Career Forward Task Force

### Agenda

June 30, 2016

*Light Breakfast - (Optional) starting at 8:10 a.m.*

- |       |  |            |
|-------|--|------------|
| I.    | <i>Overview of Today</i><br>Dr. Danielle Mezera<br>TN Assist Commissioner of Education   | 8:30 a.m.  |
| II.   | <i>Profile of Practice (Local/County)</i><br>Beth Duffield<br>Vice President of Workforce Development<br>Rutherford County Chamber of Commerce     | 8:35 a.m.  |
| III.  | <i>Profile of Practice (LEA)</i><br>Arlette Robinson<br>Director of CTE<br>Bradley County Schools  | 9:05 a.m.  |
| IV.   | <i>Break</i>   | 9:35 a.m.  |
| V.    | <i>Profile of Practice (Region)</i><br>Lillian Hartgrove<br>Vice President, Workforce Development<br>Highlands Initiative, Upper Cumberland Region | 9:45 a.m.  |
| VI.   | <i>Transition to Small Group</i>   | 10:15 a.m. |
| VII.  | <i>Small Group Work: Defining a Ready Student</i>  | 10:25 a.m. |
| VIII. | <i>Lunch Break</i>   | 11:30 a.m. |
| IX.   | <i>Small Group Work: Guiding Principles &amp; Recommendations</i>  | 11:45 a.m. |
| X.    | <i>Transition to Large Group</i>   | 12:50 p.m. |
| XI.   | <i>Circling Back</i><br>Assist Commissioner Mezera   | 12:55 p.m. |
| XII.  | <i>Dismissal</i>   | 1:00 p.m.  |

# Pathways Rutherford & Workforce Development

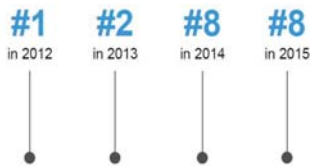


# A Community Snapshot



## JOB GROWTH

Top ten metro in the U.S. for job growth **four years in a row.**



San Jose	4.5%
Riverside	4.3%
Oriando	4.2%
Austin	4.1%
Las Vegas	4.0%
Denver	3.7%
Atlanta	3.7%
Nashville	3.6%
Raleigh	3.6%
San Francisco	3.5%



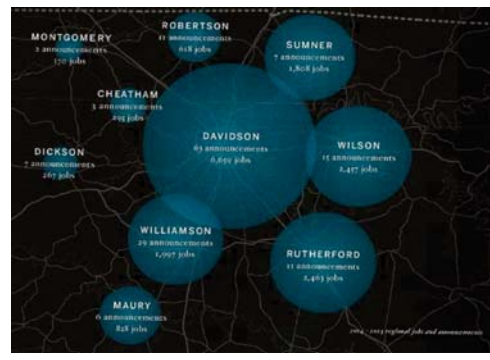
## Stats on Rutherford County

#9	County with highest annual wage of \$43,888 in Tennessee Source: Daily News Journal	100%	Increase in Murfreesboro Population by 2035 from 109K to 199K Source: US Census
\$72K	Avg. HH Income Source: Claris & Census	39%	Job growth in the next 10 Years Source: www.bestplaces.net
3.1%	Unemployment # May 2016 Source: Job4TN	13th	Fastest growing city in America July 1, 2014 – July 1, 2015 Source: Forbes



## Rutherford County Economic Development Snapshot

- Jobs created last year: 2,700
- Recent announcements





## Major Office/HQ Operations

- State Farm (1,662)
- Verizon (1,068)
- Square D/Schneider Electric (900)
- National HealthCare Corp. HQ (700)
- VA CPAC (456)
- Schwan Cosmetics USA (400)
- Franke USA HQ (290)
- WWL Vehicle Services Systems (250)
- SVP Worldwide HQ (160)
- Coming Soon – M-Tek, Inc.



## Rutherford County Economic Development Initiatives

### Target Markets:

- Corporate HQ and office
- Back office/shared services
- Advanced manufacturing
- Logistics/distribution
- Aviation



### Promising Opportunities

**\$19,786**

Annual living wage for a single adult in Rutherford County

**\$38,190**

Annual living wage for a single adult supporting one child

**17.6%**

Poverty rate in Rutherford County

#### Manufacturing

21% growth

**\$62,681**

Average annual wage

#### Health Care

28% growth

**\$42,726**

Average annual wage

#### Finance and Insurance

33% growth

**\$49,307**

Average annual wage

#### Professional, Scientific, and Technical Services

18% growth

**\$40,368**

Average annual wage



Source: MT Living Wage Calculator; OCEW Employees, Non-OCEW Employees, Self-Employed & Extended Proprietors - EMSI 2014.1 Class of Worker

## Largest Industries: Projected Growth

Description	2014 Jobs	2024 Jobs	Change	% Change	2014 Location Quotient	2024 Location Quotient	Current Wages, Salaries, & Proprietor Earnings*
Manufacturing	25,487	30,959	5,472	21%	2.49	2.76	\$62,681
Government	18,285	23,149	4,864	27%	0.95	1.07	\$40,617
Administrative and Support and Waste Management and Remediation Services	12,110	16,271	4,161	34%	1.29	1.37	\$23,879
Retail Trade	16,363	19,624	3,261	20%	1.11	1.14	\$25,435
Health Care and Social Assistance	11,365	14,493	3,128	28%	0.68	0.66	\$42,726
Accommodation and Food Services	11,584	13,707	2,123	18%	1.08	1.05	\$15,283
Finance and Insurance	6,259	8,340	2,081	33%	0.74	0.74	\$49,307
Other Services (except Public Administration)	6,919	8,108	1,189	17%	0.84	0.80	\$22,327
Real Estate and Rental and Leasing	6,071	7,206	1,135	19%	0.87	0.81	\$20,450
Construction	7,327	8,377	1,050	14%	0.98	0.92	\$37,730
Professional, Scientific, and Technical Services	5,372	6,363	991	18%	0.53	0.49	\$40,368

Source: OCEW Employees, Non-OCEW Employees, Self-Employed & Extended Proprietors - EMSI 2014.1 Class of Worker

## Stats on Rutherford County Schools

2

School Districts  
Rutherford County & Murfreesboro

93%

Graduation Rate

4<sup>th</sup>

Largest District in TN  
when combined

21%

CTE Concentrators  
10,307 students enrolled

80+

Number of languages  
spoken in Rutherford  
County & Murfreesboro  
City Schools

99%

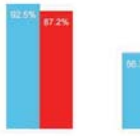
Graduation rate for CTE  
students



## 2015-2016 Rutherford County Higher Education Snapshot

### Graduation and College Going Rates

County Tennessee



Source: TH2 and TH3



### Recent High School Graduate Average ACT



Source: TH2 and TH3



## Post-Secondary Partners



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## Our Approach to Workforce Development

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## Our Challenge is the Same as the State's Challenge. . .

There are **more jobs** in Tennessee than qualified applicants and 55% of jobs in TN will require some post secondary by 2025.

There is a **disconnect** between educational preparation and industry growth and needs. Students are spending time and money **not** completing programs that put them into gainful employment.

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## The Vehicle for Change: Pathways Tennessee

### Overall Goal

To provide Tennessee students in grades 7<sup>th</sup>-14<sup>th</sup>/16<sup>th</sup> access to rigorous academic/career pathways, which are interlinked with local, regional, and state economic/labor market needs and trends in order to develop and promote a workforce that is educated and skilled in their chosen fields.



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The Rutherford County Chamber of Commerce serves as the intermediary for facilitating the vision and mission of Pathways Rutherford by convening opportunities for educators and industry partners to work together to create something new.

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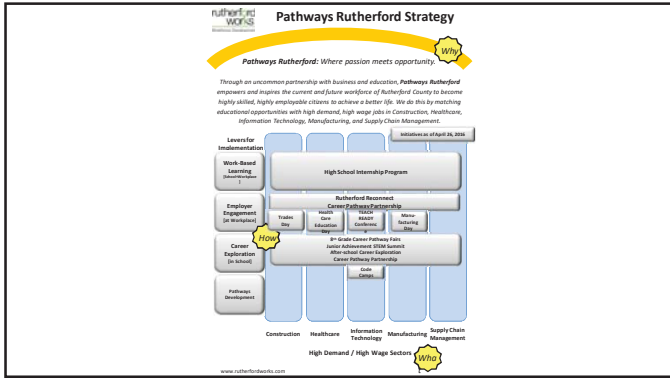
### Vision

**Pathways Rutherford:** Where passion meets opportunity.

### Mission

Through an uncommon partnership with business and education, **Pathways Rutherford** empowers and inspires the current and future workforce of Rutherford County to become highly skilled, highly employable citizens to achieve a better life. We do this by matching educational opportunities with high demand, high wage jobs in Healthcare, Information Technology, Manufacturing, and Transportation and Logistics.

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**Rutherford Works Health Care Council**

**Purpose Statement**

The primary purpose of the Rutherford County Health Care Advisory Council is to address the current and projected shortages of health care professionals in Rutherford County. A secondary purpose is to establish partnership and opportunities for collaboration between health care providers where partnerships have not existed before.

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**Rutherford Works Health Care Council**

Strategy -- Increase the number of health care industry certifications held by Rutherford County Residents

- Goal 1 – 50 new CNA certificates earned by RC Schools high school students by August 2016
- Goal 2 – 30 additional clinical placements for Rutherford County High School students during the 2016 – 2017 school year.
- Goal 3 – Add additional dual enrollment allied health pathway

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**Rutherford County Health Care Council**

**rutherford works**

**Rutherford Works Manufacturing Council**

**Purpose Statement**

The primary purpose of the Rutherford County Manufacturing Council is to address the current and projected shortages of skilled manufacturing professionals, both in entry level and advance engineering skill sets, in Rutherford County. A secondary purpose is to establish partnerships and opportunities for collaboration between manufacturing and educational leadership where partnerships have not existed before

**rutherford works**

**Rutherford Works Manufacturing Council**

Strategy - Increase the number of manufacturing entry level and engineering skill certifications held by Rutherford County Residents

- Goal 1 – Partner with local K12 education institutions to provide Certified Production Technicians (CPT) certification training for at least 50 Rutherford County High School students enrolled in the Manufacturing Pathway by March 2017.
- Goal 2 - Manufacturing employers develop partnerships with K12 educational partners to establish an internship/apprenticeship model (Schwann Model) for 10 Rutherford County High School students enrolled in the Manufacturing Pathway during the 2016 – 2017 school year.
- Goal 3 – Rutherford County Manufacturing Council employer partners and educators will work to develop a larger dual enrollment component for Rutherford County high school students enrolled in the Manufacturing Pathway for 50% of the high schools to roll out during the 2017-2018 school year (CPT and Mechatronics).

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**Rutherford Works**  
Construction Council

**MANUFACTURING DAY**  
GET STARTED NOW!

The Rutherford County Chamber wants you to join with us in the excitement of National Manufacturing Day.

Last year the Chamber celebrated Manufacturing Day by coordinating with 4 different local facilities to host tours for over 100 Rutherford County students. This year we want to make our celebration bigger by doubling the number of facilities making manufacturing facilities.

And, new this year, local facilities will have a chance to host a 2 day manufacturing camp.

**How can you support Manufacturing Day?**

- Provide a field trip/site
- Host a manufacturing camp (2 days)

**Manufacturing Day Info:**

**April 20-21, 2016**

**Facilities:** Various local manufacturing facilities.

**Activities:** Tours, hands-on activities, and presentations.

**Cost:** Free for students and teachers.

**Registration:** Open to all Rutherford County schools.

**To sign up for a tour, camp or both, contact:**

**Keith Duffield**  
Manufacturing Day Coordinator  
415.494.4360  
www.rutherfordworks.org






**Rutherford Works**  
Construction Council

**Purpose Statement**

The purpose of the Rutherford Works Construction Council is to implement a program to develop a workforce within the trades of the construction industry in Rutherford County and greater Middle Tennessee region to support the anticipated high growth over the next 10 years within the construction industry.








**Rutherford Works**  
Construction Council

**Goals**

- Develop Career Fair Opportunities
- Implement Work Based Learning
- Communicate Wages and Earnings Potential to Students and Parents
- Revive the "Build a House" program within the County High Schools

**Milestones**

- Outline the new construction pathway pilot curriculum for Oakland High School by November 24, 2016.
- Implement the construction pathway pilot curriculum throughout Rutherford County School System by ?????, 2017

**Rutherford Works**  
Tech Community

**code camp**  
summer 2016




Sponsored by Rutherford Works / Open to ALL students in Rutherford County

- 2015 & 2016 --110 middle & high school students enrolled in code camps
- 2015 RC Schools Received \$138K in Perkins Grant Funding for Rutherford County Schools
  - New computer lab
  - Training for teachers
  - Funding for industry certifications for students

**DESIGN WEBSITES**      **CREATE VIDEO GAMES**




**REGISTRATION LIMITED TO 20 PER CAMP**

To register, visit [www.rutherfordworks.org/events/tech-camp](http://www.rutherfordworks.org/events/tech-camp)

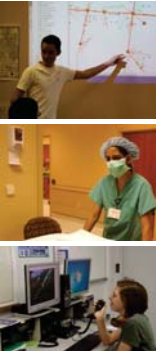

**8th GRADE**  
**Career Pathway Fair**

- Provides 8th graders with exposure to the specific pathways they can study at their future high school before they set their high school schedule (9th grade).
- Brings together CTE Teachers, exemplary students and industry experts to share details about classes student will study, opportunities they might be exposed to and the real facts about jobs in our community.
- Held at each middle school
- No cost and only 3 hours of classroom time

**High School**  
**Internship**  
PROGRAM

- 2016 Second Year of Program
- First job for 50% of the students
- 39 placements across 15 organizations
- Tied to new State Work Based Learning Standards
- Paid \$10/hour for 64 hours of work and 16 hours of work-based learning

## Teach Ready 2016

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- First ever instructional technology & STEM conference for educators
- "HOW" -- 16 workshops and 2 key note speakers -- teaching practical hands on applications for the classroom
- "WHY" -- 8 field trips to area industry



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## Teach Ready 2016

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I just wanted to let you know how much I enjoyed the TN Ready Conference!! It was Awesome! I'm already planning some lessons using robots, STEM, building cars (Nissan) for my prek classroom. It was so great to partner with you and the local businesses. I have passed the Nissan plant for almost 30 years and never been on a tour. Thanks for taking that off my bucket list! Looking forward to the conference next year and taking a different field trip.

I just wanted to personally thank you for your part in organizing this conference. It was extraordinary! I learned so much and now know my delivery of standards has changed forever. One of my favorite quotes is by Oliver Wendall Holmes, "A mind that is stretched by a new experience can never go back to its old dimensions." My mind has been stretched to see things and understand things that I never knew. I feel so connected to the ultimate outcome of why I teach, and what the business world needs, and how we as teachers can best set our students up for success. Simply tremendous information!!! Please let me in on early registration next year because I'm telling everyone I know that they absolutely must attend next year. I honestly think this conference should be mandatory because the information delivered perfectly aligned with the professionals charged with growing our future!

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### Our Keys to Success

- Facilitator/Intermediary
- Community Impact Model
- Industry Driven
  - *they have to feel the pain and see what's in it for them*
  - *willing to take risks*
- Strong K-12 and Post-Secondary Leadership
- Work with those who want to get set something done and thank the rest of their time.

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K. Beth Duffield  
[bduffield@rutherfordchamber.org](mailto:bduffield@rutherfordchamber.org)  
Rutherfordworks.com  
@ruthworkstn  
615-806-9839

rutherford works



## Bradley County Schools Career and Technical Education

Arlette Robinson  
Career and Technical Director



Cleveland Chamber.com

2015 Population 104,091	Bradley County & Cleveland City	Walker Valley & Bradley Central High School
US Bureau of Labor Statistics ranks Bradley County High in Job Growth	Low Unemployment Rate 3.8%	

Post-Secondary: Cleveland State  
Community College and Lee University

### Landscape of Bradley County

Southeast Tennessee  
Market Region is Chattanooga

### Regional & Local Partnerships

Youth CareerConnect Grant  
(Bradley County) \$ 4,499,121 (4  
years)

Southeast Tennessee Pathways  
(Bradley, Cleveland City, Hamilton,  
Marion, McMinn)

Labor and Education Alignment  
Program (Bradley, Cleveland City,  
McMinn, Meigs, Polk)

Other Partners: SE Tennessee  
STEM Innovation Hub, Southeast  
Tennessee Development District,  
TN College Access and Success  
Network, National Career Academy  
Coalition, Bradley Cleveland Public  
Education Foundation, & Tennessee  
Higher Education Commission

- 1. Government Officials**  
City of Cleveland  
Bradley County Government-Mayor
- 2. Post-Secondary Institutions**  
Cleveland State Community College  
Chattanooga State Technical Community College  
TCAT-Athens  
Lee University
- 3. Community Agencies**  
Chamber of Commerce  
Cleveland Associated Industries  
Junior Achievement
- 4. Business and Industry**  
Whirlpool Corporation  
Cormetech  
Signature Healthcare  
Olin  
Life Care Centers of America  
Bradley County EMS  
ClevelandTubing  
Tennova Healthcare  
Quality Machining  
Lonza  
Bradley Healthcare and Rehabilitation Center  
Wacker Polysilicon  
Eaton Corporation  
Mars  
DRW Machinery

### Bradley County Schools Vision Growing Students-Building Futures

**Our desired outcomes: Academic Growth, Confident  
Leaders, Competent Workforce**

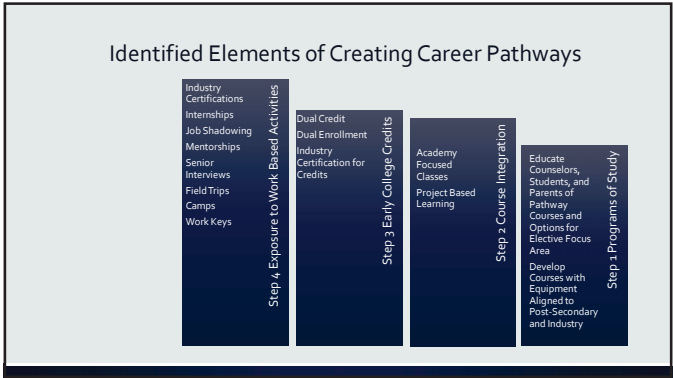
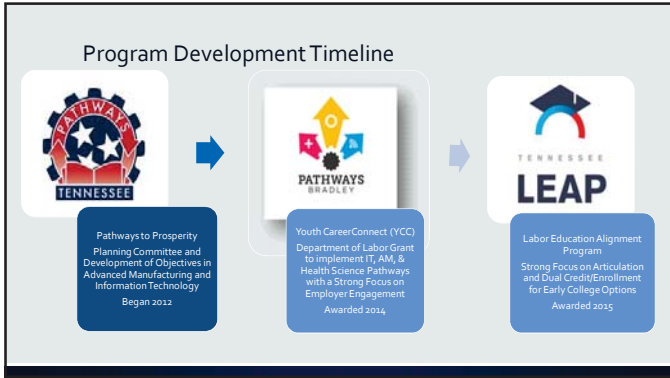
1. Ensure Educational Excellence and Equity for ALL  
students
2. Improve Systems Districtwide to Support Academic  
Outcomes and Meet Student Needs
3. Strengthen School, Family and Community  
Engagement

## Bridging the Gap Between Business and Education

"Educators and business leaders share common goals and challenges; both manage large, complex operations and want to ensure that students graduate high school prepared with the skills necessary to succeed in the workplace or in further educational opportunities. Working together, schools and businesses can achieve more than they can on their own." (Readyby21.org, p. 1)

## Advanced Manufacturing Machining, Welding & Mechatronics

Anatomy of a Pathway



### Elementary Initiative

- Programming**  
LEADERS for Life...Voyage to Greatness is an elementary leadership program focused on building leaders in the present in preparation for the future. Students learn the "Eight Principles for Sailing" while embracing the life skills needed for success in a global society.
- Educators into Industry**  
Administration field trip to Business & Industry linking learning to real world.
- Shadowing High School Students**  
Pilot activity at Waterville Community Elementary School allowed 5<sup>th</sup> grade students to shadow a high school student for the day in a career cluster class.

### Middle School Initiatives

**Student Advisories**

- Strong Student/Teacher Relationships
- Career Exposure & Soft Skills Lessons
- Alignment to High School Programs & Planning

**Expectation Matrix**

- Guide for School Culture
- Rules aligned to student Behavior Expectations in all areas of Learning
- Built around Practicing /Applying Soft Skills

**STEM Programs**

- Innovations Classes, Project Based Learning, & STEM Camps
- Coding, Robotics, & 3-D Printing
- Aligned with High School Advanced Manufacturing, CAD, & Audio Visual Programs

### High School Initiatives

#### Educating the Educators

**Teacher Field Trips**  
Faculty to Factory Day  
Professional Development After School

**Teacher Externship Program**  
Four Days in Industry  
Book Studies  
(The Hard Truth About Soft Skills & Marzano's Teaching 21<sup>st</sup> Century Skills)

**Industry Mentors**  
Paired with Pathways Bradley Teachers for group class mentor program

### High School Initiatives Cont....

*Industry and Education Work Together : Student Development*

**Career Fairs**

**Senior Interviews**

**Make It Happen Day**

**Student Field Trips to Industry Partners**

**Job Shadowing**

**Work Based Learning Opportunities Paid/Unpaid**

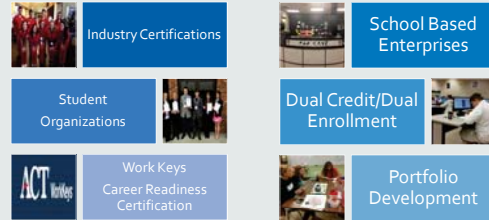
## High School Initiatives Cont....

### Course Work: Student Engagement

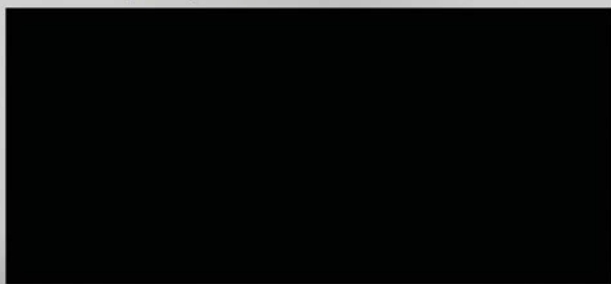


## High School Initiatives Cont....

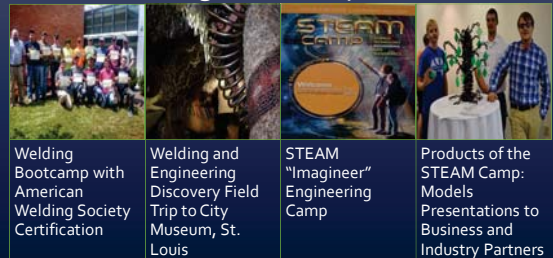
### Beyond the Diploma: Student Opportunities



## Internship Experience



## Summer Programs: Advanced Welding Bootcamp & STEAM Camp



## Program Management & Partnership Recruitment

Pathways Bradley Partnership Meetings Quarterly (All Partners Invited)

### Other Working Committees:

- Work Based Learning Committee-Teachers, Counselors, Administrators, and Grant Staff
- Camp Development Committees- Post-Secondary, Teachers, Students, & Grant Staff
- Industry specific program meetings with business and industry and education

Pathways Course and Articulation Review with Career and Technical Advisory Committee and Pathways Partners Annually in November.

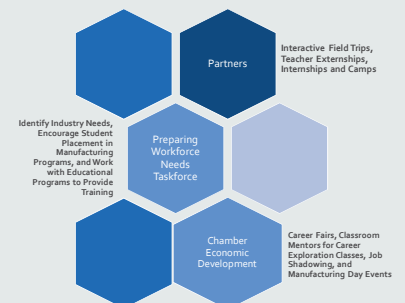
### Partnership Development:

- Create a common understanding: bring education into industry then bring industry into education
- Create true partnerships through communication and collaboration
- Review and revise efforts regularly through feedback tools

## Challenges to Program Development

Misperceptions of Manufacturing: Dingy Dark Environments with Low-Skill, Low-Wage Positions  
College for All: Means 4-Year University

Advanced Manufacturing is "Off Limits" to Students Under 18





**Sustainability**  
Continue to Develop Partnerships  
Theme Fusion  
Denso  
Jones Management  
McKee Foods

**Personnel:**  
Work Based Learning Coordinator will be incorporated into the system budget by 35% per year as the budget allows for continuation of partnership and initiative development.

**Program Costs:**  
Collaboration with partners to continue opportunities through contributions and in-kind donations.  
Utilize community partner resources i.e. Chamber of Commerce, Public Education Foundation and Cleveland Associated Industries to continue student development.

**Professional Development:**  
Continued development of career-themed academies through project-based learning initiatives within the district.  
Utilizing business and industry partners to develop relevant Work Based Learning experiences using the Work Based Learning Continuum as a guide.

**Moving Forward Recommendations for Consideration**

For Pathways Tennessee to be successful and to create a college and career ready state the same emphasis must be placed on career counseling and development, and work related experiences as we place on college planning, testing, and core academic graduation requirements.

**Personnel**

- A dedicated staff member for each high school for career counseling, development of partnerships and work related experiences
- Currently although career counseling is a 1/2 of the standards for counselors most will say scheduling and testing take the majority of their time.

**Work Based Learning**

- Assistance with barriers in Work Based Learning Placement esp. in the field of advanced manufacturing
- Continue opportunities for teachers to collaborate through WBL PLCs
- Students gain understanding through experiencing the workforce.

**Funding**

- Funding for equipment and programming at the secondary level.
- In order to prepare a workforce, we need a pipeline of students with knowledge of equipment aligned to post-secondary and industry.

**Questions**

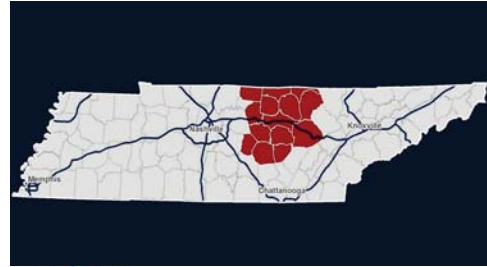
Arlette Robinson  
Career and Technical Director  
arobinson@bradleyschools.org  
423-479-0458  
thinkcte.org

Highlands Workforce  
Development and Education

Lillian Hartgrove  
Vice President

June 30, 2016

## Upper Cumberland



## Upper Cumberland Profile

- Population: 345,381
- Labor Power:
  - Labor Force: 146,430
  - Employment: 139,820
  - Unemployment: 6,610
  - Percent of Labor: 4.5%

## Upper Cumberland Profile

- Notable Companies:
  - Communications: Charter/Spectrum and Frontier
  - Financial: BB & T, Regions Bank, SunTrust, US Bank
  - Distribution: Academy Sports Distribution Center, Perdue Farms
  - Transportation: Federal Express and Averitt Express
  - Manufacturing: APCOM (A O Smith), ATC Automation, Cummins, FICOSA, Flowserve, Jackson Kayak, Lee Company, TUTCO, Oreck/TTI
  - Medical: Cookeville Regional Medical Center, St. Thomas Hospital

## Upper Cumberland Profile

- Secondary Education:
  - Clay, Jackson, Overton, Putnam, Warren and White School Districts
- Postsecondary Education:
  - Tennessee Technological University
  - Tennessee College of Applied Technology
  - Motlow State Community College
  - Vol State Community College

## Highlands Partner Counties



## Mission

**Preparing the citizens of the Upper Cumberland for college and careers**

## Mission

**To establish collaborative programs that will lead to a 21<sup>st</sup> century workforce through enhanced training, education, skill development, and work-based learning opportunities to meet the needs of targeted and existing industries**

## Strategic Goals

- Provide academic/career exploration for students through academic career coach positions beginning with 7<sup>th</sup> grade students through post-secondary education, increasing student access each year.
- Engage regional stakeholders in advancing Pathways TN mission and vision in the Upper Cumberland Region, ensuring alignment to local priorities and strategies.
- Conduct an annual assessment of regional labor force data to determine trends for new pathways creation.

## Strategic Goals

- Establish parental and community engagement methodologies designed to inform and create a culture of understanding and support of the Pathways work.
- Partner with state leadership team to advance the work and to maintain communication with statewide Pathways strategies.
- Identify and tap into funding streams for long-term sustainability of the Pathways work.

## Strategy

- The Rationale:
  - Began by listening to regional stakeholders
  - Major concerns expressed
  - A skilled workforce #1 priority
- Engagement:
  - All voices required
  - Step outside the silos
  - Address the opportunities together
- Assessment of the Priorities
  - Job Creation-Existing and New Industry
  - Labor data
  - Local industry surveys
  - Industry meetings

## Strategy

- Selected Pathways
  - Advanced Manufacturing
  - Health Science
- Formed Teams
  - Secondary
  - Postsecondary
  - Employers
- Assessed Program Continuum for 7-14/16
  - Reviewed curricula
  - Addressed gaps



## Strategy

- Action Steps
  - Reported gaps to Pathways Project Director
  - Determined focus: 7-14/16
  - Emphasize Academic and Career Connections
    - 7<sup>th</sup> grade career exploration modules
    - Middle School Speakers Program
    - 8<sup>th</sup> grade employer based tasks
    - 8<sup>th</sup> grade career fair
    - High School Programs of Study
    - Work-based learning Classes
    - Internship placements
    - Interview Boot Camp and Job Fair
    - Post-secondary alignment and seamless articulation agreements



## Student Job Fair



## Upper Cumberland Approach

- Focus Area Selection
  - Driven by employer demand
  - Economic considerations
    - Growing the economy
    - Attracting new industry
  - Partially backed by labor data
- Eliminating Silos for Success
  - Education the solution
  - Employer input required
  - Convening all to the “table”
- Structure:
  - Oversight Steering Committee: Bi-monthly
  - Action Teams: Monthly initially
  - Academic Career Coaches: Monthly

## Upper Cumberland Approach

- Steering Committee Members
  - Six School District Directors
  - Postsecondary Education Directors
  - Business and Industry Leaders
- Reporting Structure
  - Chamber Board of Directors
  - Highlands Economic Partnership
  - Joint Economic and Community Development Board
  - City and County Governments
  - State Pathways Director and Project Manager



## Upper Cumberland Approach

- Critical Partners
  - ✓ Employers
  - ✓ University
  - ✓ Community Colleges
  - ✓ TCATS
  - ✓ K-12
  - ✓ WIOA
  - ✓ Chambers of Commerce
  - ✓ City/County Government



## Upper Cumberland Approach

- Identified Measures
  - ✓ Enrollment growth in POS and Selected Pathways
  - ✓ Industry Certifications/Credentials
  - ✓ Dual enrollment
  - ✓ Demand for WBL classes
  - ✓ Internship Participation
  - ✓ Job Placements
- Timeline
  - ✓ 2008 Highlands Workforce Development and Education
  - ✓ 2012 Joined Pathways TN Team
  - ✓ 2013 Began Pathways Implementation in Four Districts
  - ✓ 2015 Expanded Pathways to Two Additional Districts

## Planned Growth

- Information Technology Pathways 2016
- Teacher Externship Program 2016
- Summer Bridge Program 2017
- Expand to Other Upper Cumberland Counties
  - PeerVoices
  - Chambers of Commerce
  - Directors of Schools
- Engage More Employers, Ongoing
- Increase Work-Based Learning Placements, Fall 2016

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Successes

- Strong Collaborations and Partnerships
- Fulfilling the Agreement
- District Friendly Competition
- Shift in Programs of Study
- Academic Career Coach Position
- Mechatronics in the High Schools-LEAP Grant
- Student Engagement-Pipeline Growing
- Work-Based Learning Internships
- Perkins Reserve Grant

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Successes



HIGHLANDS  
ECONOMIC PARTNERSHIP

## Stakeholder Engagement

- Started with Simple Requests
  - Career fair speakers
  - Classroom speakers
  - Site tours
  - Parental engagement seminars in the workplace
  - Serving on committees
- Building up to larger asks
  - Work-Based Learning internships
  - Funding support

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Challenges and Opportunities

- Articulation Agreements from TCATs to Community Colleges to the University
- Dual Enrollment Issues
- Program Limitations
  - Secondary: Funding, staffing, population
  - Postsecondary: Progression Gaps
- Student Demand vs. Capacity

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Sustainability

- Leadership Required: Chamber Board of Directors and Highlands Economic Partnership Steering Committee, Chamber CEO and WFD & E VP
- Hard Costs
  - School District Personnel
  - Intermediary personnel
  - Marketing: websites, brochures

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Sustainability

- Funding Sources
  - Public Partners
    - City and County
  - Private Investors
    - Financial Institutions
    - Industry Sectors
    - Philanthropists
  - Grants
    - Local, State, Federal and Foundations

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Task Force Considerations

- Postsecondary Territorial Issues
- Negative Postsecondary Competition
- Capacity Challenges in Secondary Education
- Gaining Parent and Student Support/Interest
- Funding Issues
- Stakeholder Competing Priorities
- Must Have Collaborations
- Need a Respected Convener Organization

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Task Force Recommendations

- Encourage Regional Collaborations and Partnerships
- Expand Pathways to Prosperity Program
- Provide Launch Funding
- Identify Regional Intermediary/Convener
- Foster Silo Elimination
- Obtain Stakeholder Buy In
- Form Highly Committed Action Teams

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Task Force Recommendations

- Results Maintain Engagement
- Utilize Peer Voices for Buy-in
- Be Honest: It's Hard Work and Takes Time
- Evidenced Based Data Will Not Happen Rapidly
- Postsecondary Education Course Alignment and Course Offerings

HIGHLANDS  
ECONOMIC PARTNERSHIP

## Final Thoughts



HIGHLANDS  
ECONOMIC PARTNERSHIP

HIGHLANDS  
ECONOMIC PARTNERSHIP

Questions and Answers

## Career Forward Task Force

### Agenda

July 27, 2016

*Light Breakfast - (Optional) starting at 8:10 a.m.*

- |       |   |            |
|-------|---|------------|
| I.    | <i>Overview of Today and Remaining Work</i><br>Dr. Candice McQueen<br>TN Commissioner of Education                            | 8:30 a.m.  |
| II.   | <i>TN Succeeds Vision and Opportunities through ESSA</i><br>Commissioner McQueen  | 8:35 a.m.  |
| III.  | <i>Review of Salient Points from Previous Sessions</i><br>Dr. Danielle Mezera<br>Assistant Commissioner of Education          | 9:35 a.m.  |
| IV.   | <i>Break</i>  | 10:00 a.m. |
| V.    | <i>The Life of a Ready Student: What We Know and Don't Know, cont'd</i><br>Dr. Jason Parker<br>Grant Manager and Data Analyst | 10:10 a.m. |
| VI.   | <i>Large Group Discussion: Defining a Ready Student</i><br>Facilitator: Commissioner McQueen                                  | 10:45 a.m. |
| VII.  | <i>Transition to Small Group: Setting Expectations</i><br>Assistant Commissioner Mezera                                       | 11:00 a.m. |
| VIII. | <i>Small Group Work: Guiding Principles &amp; Recommendations</i>   | 11:10 a.m. |
| IX.   | <i>Lunch Break</i>  | 11:45 a.m. |
| X.    | <i>Small Group Work: Guiding Principles &amp; Recommendations, cont'd</i>   | 12:00 p.m. |
| XI.   | <i>Transition to Large Group</i>  | 12:50 p.m. |
| XII.  | <i>Circling Back</i><br>Commissioner McQueen  | 12:55 p.m. |
| XIII. | <i>Dismissal</i>  | 1:00 p.m.  |



## CAREER FORWARD TASK FORCE

July 27, 2016

### CHARGE: CAREER FORWARD TASK FORCE

- Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
- Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.

### GUIDING QUESTIONS

1. How do we know when a student is "career ready" at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state's economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

### FOCUS OF JULY GATHERING

#### Presentations:

1. ESSA and its Role in Affirming Student Career Readiness and Postsecondary Readiness for TN
2. Salient Points from Previous Sessions: Tying it Up
3. Life of a Ready Student, Cont'd

#### Large and Small Group:

- Definition of a *Ready Student*
- Cont'd work on Guiding Principles
- Cont'd work on Recommendations

### AREAS OF FOCUS/REMAINING MONTHS

- March:** Kickoff: focused on Charge and Setting the Stage; high level review of Interconnectedness of Education, Industry, and Career Choices
- April:** Review of Federal Acts and State Approaches around Education, Labor and Industry; Begin defining a "Ready Student" by review of TN's secondary/postsecondary CTE and Work-Based Learning
- May:** Defining a "Ready Student," using Data; Approaches Used to Move a Student to Readiness; Student Voices on Readiness and Transitions
- June:** Structures and Systems: existing Strengths, Alignments, Barriers, Gaps, Culture/Perceptions, Plans and Models of Practice at Local, Regional, State Levels; Defining a *College and Career Ready Student*
- July:** New Approaches to Data Collection, Evaluation, and Assessment to Ascertain "Ready Student;" ESSA; Definition/Recommendations/Guiding Principles-Cont'd Work
- August:** Final Discussion on CF Report - Gain Sign Off; Review of State's Other Major Initiatives and the Role of CF Report; What Happens Next?





## Career Forward Taskforce: ESSA Update

July 27, 2016

Dr. Candice McQueen | Commissioner of Education



## What is ESSA?

### Every Student Succeeds Act

- ESSA contains new policies that will affect existing systems and structures for assessment, accountability, and reporting in Tennessee
- States now have authority to make decisions regarding assessments, goals, school improvement, and accountability standards
- TDOE is currently soliciting input from multiple stakeholder groups to inform the development of a state plan that aligns our strategic plan, Tennessee Succeeds, with the requirements of ESSA



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### ESSA State Plan - Overarching Goal

To develop a Tennessee-specific ESSA state plan, aligned with the department's strategic plan and informed by meaningful consultation with stakeholder groups.



### Timeline for Developing TN's ESSA Plan

Kick-off	Stakeholder Input	Writing the Plan	Stakeholder Feedback	Approving the Plan
May 2016	June–Sept. 2016	Sept.–Nov. 2016	Dec. 2016–Jan. 2017	Feb.–March. 2017

Stakeholders will include directors of schools, principals, educators, parents and students, legislators, governor's office, state board of education, school board members, CORE offices, community organizations, and advocacy groups.



## ESSA State Plan Update

## ESSA State Plan Working Groups

Six working groups:

- Accountability
- Standards and Assessment
- English Learners
- Educator Support and Effectiveness
- Student Support
- School Improvement

Working groups are comprised of individuals who are

- Geographically diverse
- Represent multiple stakeholder groups
- Representative of both policy and practitioner points of view



## Other Opportunities for Input

ESSA feedback form on website:

<http://tn.gov/education/topic/essa-feedback-form>

Many of the current task forces and advisory committees will be hosting input/feedback sessions:

- Career Forward Task Force
- Teacher Advisory Council
- Governor's Teachers Cabinet
- SWD Advisory Council
- CPM Advisory Committee
- Personalized Learning Task Force
- Assessment Task Force 2.0
- TSBA Regional Meetings
- TOSS
- Urban League
- StudentsFirst
- SCORE
- TEA and PET



## Accountability: District-specific

### ESSA Requirements

- States have the ability to design their own **accountability systems** and will no longer submit waivers to USEd.
- In their accountability system, states must consider
  - proficiency on annual assessments
  - a measure of growth on annual assessments
  - graduation rates
  - progress in achieving English language proficiency
  - at least 95 percent of their students participate in all annual assessments
  - measure of school quality and success

### Tennessee Requirements

- New district accountability system** adopted in summer 2015
- Three pathways to demonstrate performance for **both achievement and gap closure** components.
- Acknowledges student growth between achievement levels and growth using **TVAAS** (T.C.A. § 49-1-603, -605, -606)
- Incorporates **ACT/SAT** performance and growth
- Four district determinations of **In Need of Improvement, Progressing, Achieving and Exemplary**
- Districts that fail to meet the 95 percent participation rate in any subject or subgroup designated "**In Need of Improvement.**"



## Accountability: School-specific

### ESSA Requirements

- Annual report cards** required
- Student achievement on academic assessments for all students and disaggregated by *all* subgroups
- Number and percentage of English learners achieving **English language proficiency**
- Performance on **other academic indicators** for elementary and secondary schools and high school graduation rates
- Performance on **other indicator(s) of school quality or student success** used by the accountability system
  - School quality, climate, and safety, suspensions, expulsions, chronic absenteeism, and more

### Tennessee Requirements

- The annual Report Card must include an **A-F grading system** for schools per new state law
  - TDOE and SBE will work in collaboration to develop A-F grading system criteria
- Current disaggregation only includes four key subgroups (BHN, ED, EL and SWD)
- Some non-academic indicators on the Report Card are attendance, suspension rates, and highly-qualified teachers
- Currently, schools are not included in same accountability framework as districts



## Guiding Principles

Indicators in our state accountability framework should:

- **Align** with our vision and strategic plan
- Promote student **college and career readiness**
- Provide **actionable** and timely feedback
- Reward **excellence** and identify **equity** issues
- Provide **additional pathway** for districts to demonstrate success
- Minimize **unintended consequences**
- **Comply** with state and federal law

Tennessee has an opportunity to make a strong statement about measures beyond state test data that we prioritize and believe ultimately contribute to student success after graduation.

## Considered Inputs: Equity and Postsecondary Readiness

- Potential Indicators:
  - Chronic absenteeism
  - Discipline data
  - Social and emotional learning surveys
  - Early postsecondary opportunity and industry credentials
  - Access to effective teachers
  - Other suggested measures



## Considerations and Next Steps in Analysis

## EPSOs: Incomplete, Delayed Data

- The only data that are remotely complete enough for inclusion in accountability would be:
  - The number of available EPSOs in each district (and perhaps school)
  - (Tentative) The number of students participating in each EPSO
- Any other inputs around college and career readiness would be quite lagged (e.g., percent of students still enrolled in college two years after graduating)

## EPSOs: Limiting Available Options

- Because not all students take a summative assessment or because assessment variation is low (i.e., high pass rates) in certain EPSOs, including measures of achievement in all EPSOs is not feasible.
- Options for overcoming incomplete data:
  - Limit EPSOs included in accountability to core subjects
  - Limit which EPSOs are included in accountability (in order to look at achievement)
  - Incentivize certain EPSOs through weighting (e.g., AP participation counts more than local dual credit)
  - Use course progression in CTE career clusters and programs of study, recognizing that course enrollment data have their own challenges

## Discipline: Weighting Overcomes Variation

- While the trepidation around disparities in discipline data is understandable, we could apply a nuanced approach to including such data points equitably.
  - Apply different weighting to expulsions, suspensions (in-school and out-of-school)
  - Apply different weighting to longer suspensions
  - Apply different weighting based on number of incidents (i.e., count subsequent incidents more)

## Access to Effective Teachers: Within-School Distribution

- Access to highly effective teachers accounts for variation in distributions of effective teachers.
  - Minimum required counts for student groups/teachers of different effectiveness
  - Underperforming teachers that may be “difficult to remove” from the classroom are not an inherent disadvantage; rather, their **assignment** is the keystone.

## Opportunity Index: Individual Inputs

- Given the feedback we have received from this and other groups, as well as the data considerations highlighted, the following inputs seem the most appropriate for inclusion in an opportunity index.
  - Chronic absence
  - Access to effective teachers
  - Discipline
  - (Potential) access to early postsecondary opportunities



## Small Group Discussion

## Follow Up Questions

- How do we ensure different schools (e.g., large/small, urban/rural, racially heterogeneous/homogeneous) have the same opportunity to demonstrate a full picture of school quality and student success?
- Are there individual components of these metrics that seem more appropriate for accountability (e.g., expulsions but not suspensions, dual enrollment but not AP courses, etc.)
- What potential downsides/unintended consequences do you foresee?




## Questions?



Districts and schools in Tennessee will exemplify excellence and equity such that all students are equipped with the knowledge and skills to successfully embark on their chosen path in life.

Excellence | Optimism | Judgment | Courage | Teamwork

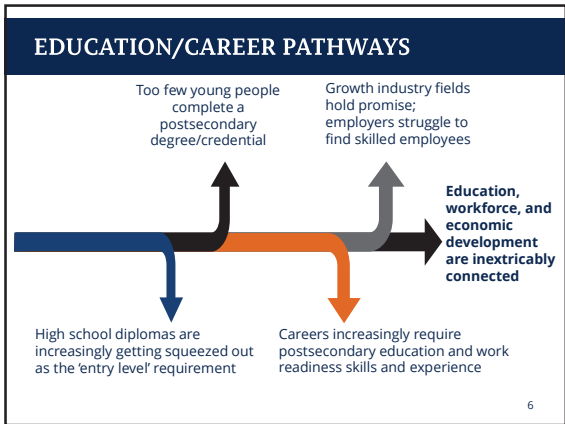
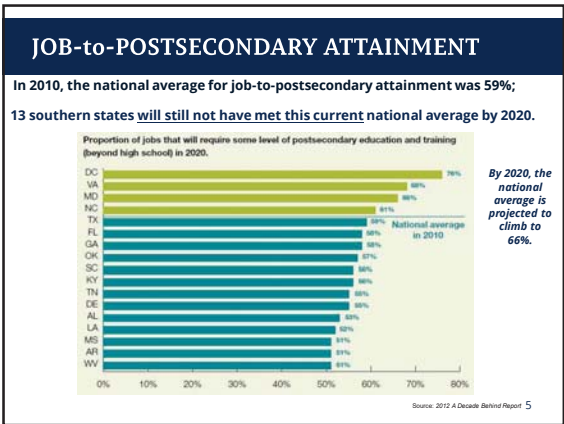
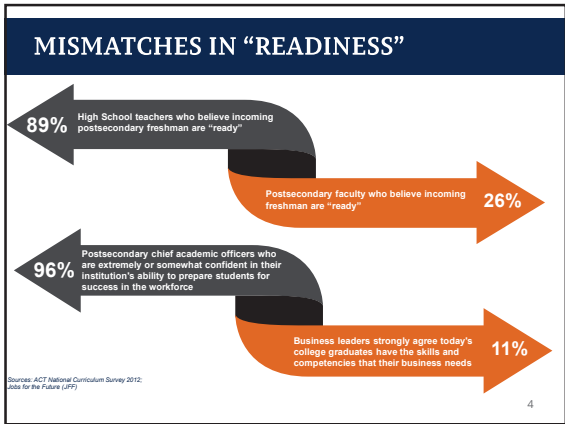
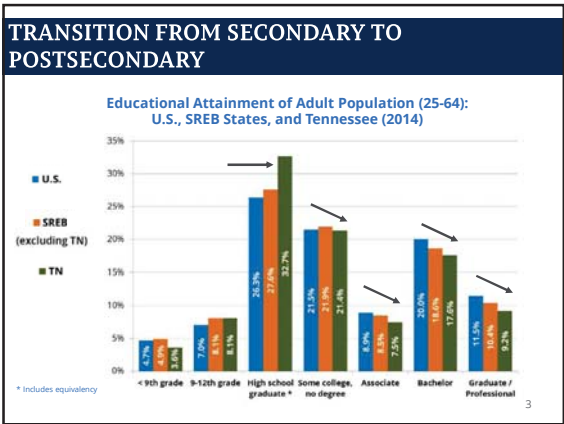


**Career Forward Task Force  
Key Takeaways**

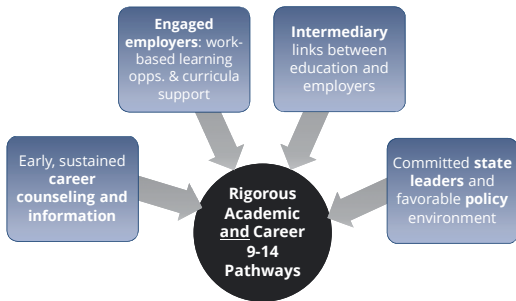
July 27, 2016



**March**



## KEY STUDENT PATHWAYS IMPLEMENTATION LEVERS



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## A New Model for Education: P-TECH 9-14

- **Focus:** A new grade 9-14 public school model focused on STEM fields and Career and Technical Education
- **Mission:** Enable students to master the skills that they need either to graduate with a no-cost Associates in Applied Science (AAS) degree that will enable them to secure an entry-level position in a growing STEM industry, or to continue and complete study in a four-year higher education institution.

**P-TECH: The pathway from classroom to career to a stronger economy**

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**Early College Model - directed approach rather than traditional approach**

**P-TECH: The pathway from classroom to career to a stronger economy**

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April

## MARCH MEETING: TAKEAWAY QUESTIONS

- What are the best predictors of postsecondary and career readiness?
- How are we tracking outcomes? Accountability? Where are our students going and what are they doing?
- Should we be encouraging more Early College opportunities?
- How are we making student "pathways" more obvious and best using our school counselors?
- How are we embedding more authentic experiences for all students?

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## DRIVE TO 55

Governor Haslam initiated the Drive to 55 programs with a mission of having 55% of Tennessee's working age adult population equipped with a college degree or certificate by 2025.

No. Tennesseans (Age 25-64) by Highest Credential	2012	2013	2014	2015
Certificate	136,630	136,794	137,530	138,304
Associate's	250,219	257,289	256,817	260,210
Bachelor's	583,335	582,617	605,594	616,128
Graduate or professional	300,693	317,495	315,247	322,939
<b>Total</b>	<b>1,272,877</b>	<b>1,294,249</b>	<b>1,315,188</b>	<b>1,377,581</b>
% of population age 25-64 with a postsecondary credential	37.3%	37.8%	38.3%	38.7%

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## TENNESSEE WORKFORCE DISRUPTION INDEX

1.4 Million (50%) of Tennessee's current jobs have a high probability of automation



The map above shows the percent of jobs that are vulnerable to automation in each county.

- Educational attainment will improve a community's ability to manage and align with automation; to complement and take advantage of automation.

### Automation will disrupt the workforce landscape - not replace it

- Greater demand for critical thinking, judgment, human perception, creativity, social intelligence
- Technology can complement labor, and boost productivity, incomes, leisure time

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## HIGH QUALITY WORK-BASED LEARNING

- IF high quality WBL is grounded in district/school culture that supports career readiness for all students, and
- IF high quality WBL is meaningful and progressive, allowing students to progress from an early age, then
- High Quality WBL will be measurable by:
  - Pre- and Post- Experience/Exposure Assessments
  - Professional Development/Teacher Supports
  - Early Student Experiences - tracked/captured
  - Student Portfolios Demonstrating Student Growth
  - ROI and Industry Partner Participation Evaluations

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  - ROI and Industry Partner Participation Evaluations

**How do we ensure that we get there?**

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## FEDERAL INTERSECTION POINTS AND STRATEGIES TO CONSIDER

- Accountability systems:
  - Share responsibility across programs/systems
  - Establish limited set of quality indicators
  - Design programs/services around desired outcomes
- Braiding funding streams
- Performance-based/incentive funding
- Connecting Career Pathways, CTE POS, and Sector Strategy initiatives



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## ESSA - KEY INTERSECTIONS WITH WIOA/PERKINS

- State and local plan coordination
- State standards development
- "Well-Rounded Education" & CTE
- "Recognized Postsecondary Credentials"
- Measure(s) of "school quality or student success" and "career readiness"
- Greater support for dual/concurrent enrollment
- Student transitions between secondary and postsecondary education

17



May

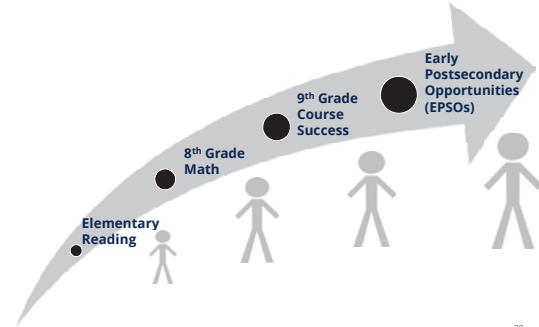
## HIGH LEVEL TAKEAWAYS

What we have learned so far:

- “Career Ready” must be meaningful, rigorous, and relevant for students and must align with employer needs and occupational opportunities.
- Employer engagement in a student’s learning lifecycle must be robust and diverse, enhancing, and assuring what occurs in the classroom and in the work setting.
- There are multiple learning models, approaches and experiences that can impact the development of “ready student.” But which ones are the right ones, and how should they be promoted?
- Federal legislation can be a game changer for states who commit to leveraging shared focuses.
- Student readiness measures cannot predict student success if they are not aligned by both process and outcome.

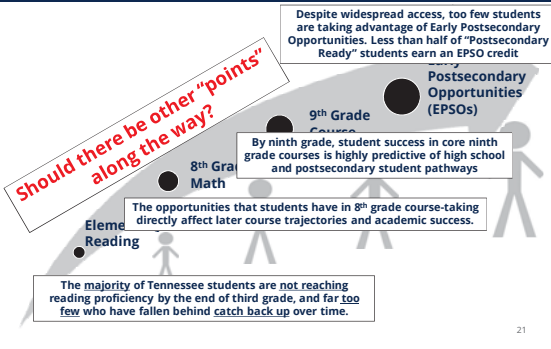
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## “POINTS OF LEVERAGE” ACROSS THE COURSE OF A STUDENT K-12 TRAJECTORY



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## “POINTS OF LEVERAGE” ACROSS THE COURSE OF A STUDENT K-12 TRAJECTORY



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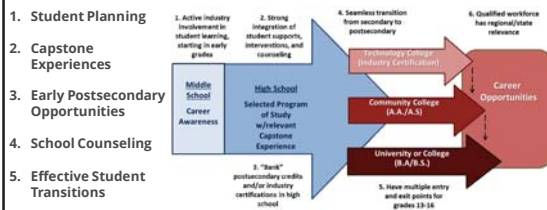
## CURRENT TN ASSESSMENT LANDSCAPE

- **Grade 2 (optional)**
  - ELA and Math
- **Grades 3-11**
  - Math
    - Math 3-8
    - Algebra I, Geometry, Algebra II
    - Integrated Math I, II, III
  - ELA
    - ELA 3-8
    - English I, II and III
      - Writing incorporated in TNReady
- **Grades 3-11 (continued)**
  - Science
    - Science 3-8
    - Biology, Chemistry
  - Social Studies
    - Social Studies 3-8
    - US History
- **Alternate Assessments**
  - MSAA (ELA and math)
  - ACCESS for ELs
  - Science and Social Studies

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## EFFECTIVE K-14/16 STUDENT PATHWAY

### Toward a Ready Student



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June



## COMMUNITY STAKEHOLDER

### Challenges to Career Exploration

- Just scratching the surface
- Old stereotypes about CTE from Guidance & Parents

### Recommendations

- Career exploration components beginning in elementary school that are measured
- Required career exploration/high school 101 class for middle school students tied to CTE pathways
- Training for K-12 counselors around CTE pathways

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## COMMUNITY STAKEHOLDER, CONT'D

### Challenges to Work-Based Learning

- Scale & Scope
- Finding pathway relevant work sites
- Changing the mindset that under 18 are not employable

### Recommendations

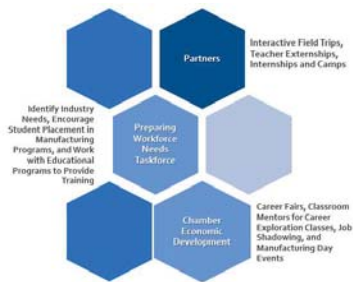
- State level incentives for employers to hire under 18
- Model Georgia's Great Promise Partnership

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## DISTRICT STAKEHOLDER

### Challenges to Program Development

Misconceptions of Advanced Manufacturing: Dismy Dark Environments with Low Skill, Low-Wage Positions  
College for All Means 4-Year University  
Advanced Manufacturing is "Off Limits" to Students Under 18



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## DISTRICT STAKEHOLDER, CONT'D

### Moving Forward Recommendations for Consideration

To be successful and to create a college and career ready state the same emphasis must be placed on career counseling and development, and work related experiences as we place on college planning, testing, and core academic graduation requirements.




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## REGIONAL STAKEHOLDER

### Recommendations and Considerations

- Articulation Agreements from TCATs to Community Colleges to the University
- Dual Enrollment Issues – fully fund 4 courses
- Program Limitations
  - Secondary: Funding for equipment, staffing, Student Demand vs. Capacity
  - Postsecondary: Progression of students
- Remove Postsecondary Territorial Issues and Competition
- Gaining Parent and Student Support/Interest
- Encourage Regional Collaborations and Partnerships
- Provide Launch Funding for Regional Intermediary/Convener to drive and sustain secondary-postsecondary-industry regional collaboratives
- Establish accountability measures that reflect progressive student readiness

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## Toward a data strategy for college and career readiness

Jason Parker | Division of CCTE | July 27, 2016

### Definition of CCR, version 1

- Tennessee students will leave K-12 education with the knowledge, skills, mindset, and abilities to be positive members of society. This includes being able to achieve fundamental tasks, such as continuing their learning pathway, successfully holding a job, participating in our democratic process, making healthy decisions for themselves and their families, and advocating for their personal values and beliefs.
- In order to be able to achieve these outcomes, students must possess proven academic and technical knowledge and skills, as well as employability skills, that can be exhibited successfully and ongoing. With such, students are aware of their current and projected career opportunities and can pursue these opportunities with confidence.

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### Directed learning pathways

Connect students' interests and aspirations with concrete education/career opportunities

Career exploration	Comprehensive school counseling
Goal setting and planning	School culture promoting readiness and "the whole child"
Purposeful course taking	Meaningful community and business engagement
Extracurricular activities	
Early postsecondary opportunities	
Capstone experiences	

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### What does a data strategy for CCR need to do?

- Show us whether the education system is offering coherent, meaningful pathways for students to pursue
- Provide information about students' progress in exploring options, selecting pathways that meet their goals, and pursuing those pathways effectively

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### Key priorities

- Students and parents need a robust view of education and career opportunities in their community, in their region, and across the state.
- Schools and LEAs need access to timely information about their students' postsecondary and employment outcomes.
- TDOE needs to lead with an outcomes-driven approach to data, rather than solely focusing on compliance.

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### Quick vocabulary lesson

- **Data** are raw observations or measurements of an object, phenomenon, or event
- **Information** is derived from a collection of data points and helps us understand some aspect of the measured object, phenomenon, or event
- **Insight** is the result of analyzing information that leads us to action
- For us, the gold standard for analytic purposes is **student-level observation data**. We can build to all other levels of aggregation through this level of granularity.

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## What TDOE knows about the K-12 trajectory

Academic and technical achievement	Social/Emotional	College/Career Readiness
<ul style="list-style-type: none"> <li>Course enrollment + grades</li> <li>Credit attainment</li> <li>TN end-of-course assessments</li> <li>ACT</li> <li>EPSO enrollment</li> <li>CTE concentration</li> </ul>	<ul style="list-style-type: none"> <li>Attendance</li> <li>Discipline (major)</li> </ul>	<ul style="list-style-type: none"> <li>WBL capstone enrollment</li> </ul>

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## Opportunities to learn more

Academic and technical achievement	Social/Emotional	College/Career Readiness
<ul style="list-style-type: none"> <li>EPSO credit articulation</li> <li>Local assessment initiatives</li> <li>More granular and direct views of skill and competency attainment</li> </ul>	<ul style="list-style-type: none"> <li>Tardiness</li> <li>Discipline (minor)</li> <li>Positive habits, skills, and traits</li> </ul>	<ul style="list-style-type: none"> <li>WBL capstone assessment and quality of placement</li> <li>Career exploration in early grades</li> <li>Industry certifications</li> </ul>

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## Opportunity: Secondary education plan

- Students are required to have a secondary education plan by end of 8<sup>th</sup> grade
- Plan could be a key advisement tool for student throughout high school
- Each student's plan could be a personalized measure for success → "Am I on track to meet my goals?"
- At the state level, we do not receive/maintain any data related to this plan



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## Beyond high school

- Since postsecondary attainment and meaningful employment are our shared goals, schools and LEAs need access to timely information about their students' postsecondary and employment outcomes
- Inter-agency data sharing is the best solution

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## Opportunities: Path to postsecondary




TN Department of Education 11

## Tennessee Longitudinal Data System (TLDS)

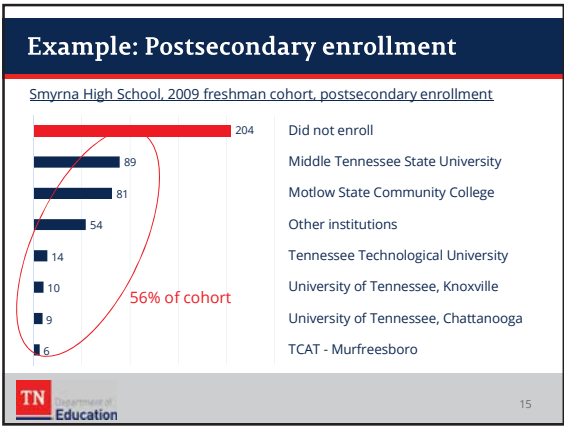
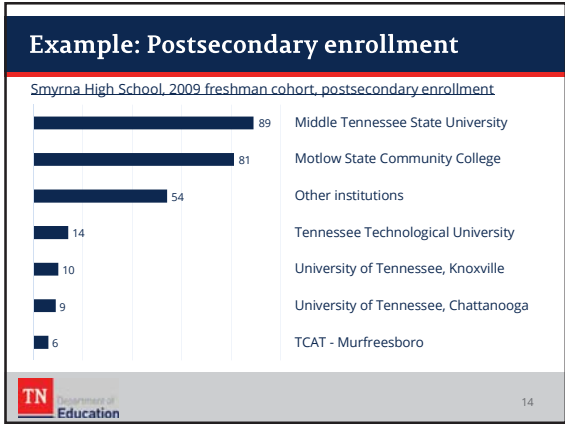
- Interagency data system that provides a view of students' trajectory from childhood to the workforce.
- Partnership between multiple agencies:
  - TDOE
  - TN Higher Education Commission
  - TN Department of Labor and Workforce Development
  - TN Department of Children's Services
- Matching algorithms link records from different data sets to give a long-term view of an individual's path

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### Postsecondary data availability via TLDS

Milestones	2009 cohort	2010 cohort	2011 cohort
High school graduation	✓	✓	✓
Postsecondary initial enrollment	✓	✓	Summer 2016
Postsecondary persistence into Year 2	✓	Summer 2016	Summer 2017
Postsecondary attainment, four years	Fall 2017	Fall 2018	Fall 2019
Postsecondary attainment, six years	Fall 2019	Fall 2020	Fall 2021

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- ### Opportunities for improved data flow
- Timeliness → Approx. six months between end of semester and availability of postsecondary semester file in TLDS
  - TDOE is working with partner agencies to learn how to use economic and workforce data appropriately
  - Challenges in matching data sets, especially for students who move directly from high school into the workforce
  - Data quality
    - For research into broad trends, we anticipate noise in the data and can use statistical methods to correct
    - For individual-focused action, the data have to be accurate at the record level
- TN Department of Education 16

### Interagency data sharing is key

- Connecting K-12 education to higher education and workforce development is a collaborative venture
- Interagency data sharing enables a robust view of the education-to-workforce pathways in our state
- Requires collaboration across agencies to understand the data and tell meaningful stories

TN Department of Education 17

# Career Forward Task Force

## Agenda

August 24, 2016

*Light Breakfast - (Optional) starting at 8:10 a.m.*

- |       |   |            |
|-------|---|------------|
| I.    | <i>Overview of Today</i><br>Dr. Candice McQueen<br>TN Commissioner of Education   | 8:30 a.m.  |
| II.   | <i>Review of Definition, Guiding Principles and Recommendations</i><br>Dr. Danielle Mezera<br>TN Department of Education  | 8:35 a.m.  |
| III.  | Break: Transition to Small Group  | 9:00 a.m.  |
| IV.   | <i>Small Group Discussion: Review of Def, GP &amp; Recs</i>   | 9:10 a.m.  |
| V.    | Break: Transition to Large Group  | 10:30 a.m. |
| VI.   | <i>Large Group Discussion</i><br>Facilitator: Commissioner McQueen  | 10:40 a.m. |
| VII.  | <i>A Ready Student: Going Forward</i><br>Panel: Commissioner McQueen, TDOE<br>Commissioner Burns Phillips, TN-DL&WD<br>Interim Chancellor David Gregory, TBR<br>Exec Dir. Mike Krause, THEC<br>COO, Ted Townsend, TDECD<br>Facilitator: Danielle Mezera | 11:00 a.m. |
| VIII. | <i>Lunch Break</i>  | 12:00 p.m. |
| IX.   | <i>Bringing It Home: Salient Points</i><br>Facilitator: Danielle Mezera   | 12:20 p.m. |
| X.    | <i>Next Steps and Dismissal</i><br>Commissioner McQueen   | 12:50 p.m. |

Appendix II:  
Meeting Notes and  
Follow-up Memos

## Career Forward Taskforce Meeting Notes

Meeting: March 24, 2016

### Introductions and Welcome by Commissioner of Education Candice McQueen

- Round robin introductions from the task force members.
- Charge of the task force: examine and explore ways to better engage students in their academic preparations, personal and social development, and workforce readiness; and identify overarching principals leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.
- The three questions the task force will be working to answer are:
  1. How do we know when a student is “career ready” at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
  2. How do we ensure that students are progressing along a directed learning pathway aligned with the state’s economic needs and employer needs at the secondary and postsecondary levels?
  3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?
- Overview of the Tennessee Department of Education’s [TN Succeeds Goal](#). Two of the goals fall directly within the work of the Career Forward task force:
  1. Tennessee will have an average public ACT composite score of 21 by 2020.
  2. The class of 2020 will be on track to achieve 55 percent postsecondary completion in six years.

### Overview of the current Tennessee landscape by Assistant Commissioner, Danielle Mezera

- As a state we have seen many successes in education recently including being the fastest improving state on NAEP, fastest growing graduation rate, consistently showing gains on TCAP, and consistently increasing ACT over the past 3 years.
- We have also experienced success in business with accolades such as #1 overall infrastructure and global development, and #2 best business climate.
- The Governor’s workforce subcabinet has recommended that Tennessee promote a state-specific definition of postsecondary and workforce readiness that is reflective of a collaborative cross agency approach leading to the development of seamless academic-career pathways to the benefit of its citizenry and industries.
  - That recommendation is being actualized through the creation of this Career Forward task force.
- Although we have seen successes as a state there have been headwinds that highlight the continued room for growth.

- Although Tennessee has a high school graduate percentage that is higher than other SREB states and the national average, it lags behind in the number of citizens with some college, no degree, associate, bachelor, and graduate professional degrees.
- ACT composite and benchmark scores have held relatively stagnant since 2011. ACT benchmark scores are the scores a student would need to score in order to have a 50 percent likelihood of scoring a B in a first year credit bearing course.
- As a state we have been tracking students longitudinally. Only 56 percent of students in the 2008 cohort (2012 graduates) enrolled in postsecondary and of those students only 6 percent of students who were enrolled after 1 year completed a degree or certificate within two years.
  - We have a mismatch in readiness.
- Tennessee ranks 36<sup>th</sup> nationally in its per capita income with a per capita income of \$40,457 in 2014.
- Tennessee is not projected to have reached the national average for job-to-postsecondary attainment of 59 percent by 2020, when it was the national average in 2010.
- STEM is a rapidly growing area of job opportunities across the state but postsecondary attainment rates are not keeping pace with the demand.
  - One in five students decide to enter the STEM careers in middle school or earlier. This is a unique opportunity for us to think about how to improve career exploration in the earlier grades.

### **Overview of the Broader Challenge by Assistant Commissioner Danielle Mezera**

- Half of all Americans reach their mid-20s without the skills or credentials necessary for success in today's economy
- Surveys revealed that students and postsecondary faculty, and postsecondary faculty and business leaders have a mismatch in their perceived understanding of "readiness." For example, 89 percent of high school teachers believe their students are ready for postsecondary and only 26 percent of postsecondary faculty believe incoming freshman are ready.
  - The same mismatch exposes itself in understanding of "preparedness." For example, 4 percent of business decision makers define preparedness as being prepared in general compared to 19 percent of high school students.

### **Call to Action Tennessee's Opportunities by Assistant Commissioner Danielle Mezera**

- The state of Tennessee is advancing in term of its workforce requirements and we have a unique opportunity to work within education to support workforce development.



### Group Discussion

Discussion on the differences between preparedness and readiness:

Group 1	Group 2
<p><b>Preparedness</b> is being able to check all the boxes such as ACT score, high school graduation, and cognitive awareness of the academic subjects such as English and math.</p> <p><b>Readiness</b> is the non-cognitive skills and awareness of opportunities. Readiness is being able to take ownership of human capital and skill development, and being able to vocalize “why is this important?” Readiness is having a growth mindset, desire to learn, and valuing skills. Readiness involves experience based-learning and knowing the dynamics of teams.</p>	<p><b>Preparedness</b> is checking all the boxes including fluency and common sense, where students have a minimum level of education. On paper Catherine looked prepared with her 4.0 GPA but having not taken the most rigorous of courses when she got to Vanderbilt she found she was not “ready” and often had to teach herself study skills.</p> <p><b>Readiness</b> is being able to adapt and figure out the answer if you don’t know where it is. Work-based learning helps students to build their readiness skills. Teachers as nurturers can unintentionally hamper readiness as they don’t let student struggle.</p> <p>The business community is more likely to value readiness over preparedness, but need both.</p>
Group 3	Group 4
<p><b>Preparedness</b> is the ability to learn, reading, and problem solving skills. Postsecondary helps to prepare students.</p> <p><b>Readiness</b> is having a certification such as WorkKeys, a strong work ethic, and being able to be on time and show up every day. Readiness is the application of skills.</p>	<p><b>Readiness</b> is the work ethic, the ability to teach yourself to learn, having work ethic, pride, desire to learn, adaptability and problem solving, and having a growth based mindset. Readiness is cultivated through work-based learning and bringing education and workforce together. Career awareness is lacking in early grades which is impacting students’ readiness.</p>

### Juxtaposition of Education and Industry National and Global Perspectives and Models

#### Presentation by Robert Schwartz, Harvard Graduate School of Education

- Tennessee was one of the first states to sign on to participate in the Pathways to Prosperity.
- The report was building on previous work such as *The Forgotten Half; Non College Youth in America*. As a county we spend \$10 per student in a public college and only \$1 on those not in school.
- Students know that they should go to college, in a survey 90 percent of students said that they are going to college but then only 70 percent enroll in some form of postsecondary and only 50 percent by their mid-twenties have a postsecondary credential.
- In the 1960’s the U.S. led the world in terms of it high school graduation rate but has since been pretty stagnant in growth, whereas other countries are catching up and advancing ahead of us. In the 1990s the U.S. ranked 13 in graduation rate. The U.S. is ranked 11<sup>th</sup> in degree attainment among young adults, ages 25-34, compared to other developed countries.

- We are one of the few countries that has the category “some college.” “Some college” represents debt and lost opportunity cost.
- The U.S. is also struggling with the challenge that students with a bachelor’s of arts are often unemployed or underemployed. We are not spending enough time helping students to think about themselves in the world and how their strengths align. We need to work on helping students see the intersection of their strengths and the available jobs.
- Colleges are not helping prepare students in the way that they should. There was a study *Academically Adrift* that interviewed 3,200 students and had them take the collegiate learning assessment of core intellectual skills as an incoming freshmen, sophomores, and seniors. Thirty-five percent of students saw no improvement on their senior year. Students are drifting into postsecondary without thinking about why.
- Seventy percent of jobs in 2020 will need a degree, but 35 percent will be an associates. Having a higher degree doesn’t necessarily mean more money, your skill alignment to the labor market matters more. Forty-three percent of young workers with licenses and certificates earn more than those with an associate’s degree.
- STEM jobs are increasing rapidly and not only for those with a bachelor’s degree. Fifty percent of STEM jobs do not require a bachelor’s degree.
- As a county we are struggling with youth unemployment. Globally countries with stronger vocational programs have the lowest youth unemployment. Switzerland has done an excellent job of stopping youth unemployment. Employers are a part of the education conversation and the postsecondary system is set up so there are no dead ends. Switzerland routinely is at the top of the education competitiveness rankings.
  - The Swiss system makes sure to combine theory with practice at a host company while students are still in K-12 schools.
- The Pathways Network is expanding across the U.S.
  - The goal is to have students complete high school with at least 12 college credits and WBL experience, attain a postsecondary credential with value in the labor market, launch a career in a high demand, high wage occupation, and advance in career and pursue further education as interested.
  - Early colleges are one way to help support this goal. Early colleges help low income and students of color increase graduation rates, college enrollment, and degree attainment. Texas and North Carolina have strong early college programs.
- Currently in the U.S. 5.5 million youth ages 16-24 are not in school or employed.
- The policy levels to help change youth unemployment are:
  - Early career counseling
  - Engage employers in work-based learning
  - Support intermediary links between education and employers- help to take the logistics off of the employer. For example, the private industry council in Boston.
  - Committed state leaders and a favorable policy environment
- Tax incentives are used in North Carolina but monetary incentives are not necessarily the solution. Students have to see a future for themselves and have the supports to get there.

## **P-Tech Grades 9-14 School Model by Maura Banta, Corporate Citizenship & Corporate Affairs at IBM Corporation**

- The P-Tech model started with a partnership between Brooklyn High school, CUNY, and IBM. Now other businesses are beginning to replicate the model.
- IBM first started with the idea as they had jobs that couldn't be filled locally and a lack of diversity in the workforce.
- P-Tech has a focus on STEM fields and Career and Technical Education and the goal is to create, "the pathway from classroom to career to a stronger economy."
- By sophomore year of high school all students take a college bearing course.
- The requirements of the model are:
  - Systemic partnership between K-12, higher education, and industry
  - The public school must be open to all students
  - Six year scope and sequence for all students to obtain an AAS degree
  - Work-based learning opportunities
  - The ability of students to work at their own pace
  - A steering committee
  - Mentoring
- There are currently 30 P-Tech schools in New York. The commitment to expanding the schools came from the Governor, an important element to have to ensure the success of the schools.
- Six students have graduated from high school with an AAS and three went onto 4 year universities and 3 went directly to work for IBM.
- The industry partnership is an integral part of the program. All students get paid internships, skills mapping, work-based learning curriculum, and mentors. Students are first in line for jobs at the business partner but are not guaranteed a position.

Answers to questions from the task force:

- Barriers to the system of P-Tech schools include:
  - Allowing students to be in high school for six years results in challenges with funding and discussion of the role of higher education.
- The P-Tech schools are a mix of converted and new.
- Special education is a small percent of the student body but are often part of the 10 percent of students who won't graduate in 6 years with an AAS.
- Tennessee barriers include:
  - Lottery money is not available for high school students.
  - It is a challenge to get it all in with the state graduation requirements.
  - Competency-based education could be built up in Tennessee.
- Some students do struggle with the course load but their favorite and most challenging part is being a high school student taking college level coursework is that they are a high school student taking college level coursework.

## **Fireside Chat facilitated by Assistant Commissioner, Danielle Mezera between Robert Schwartz and Maura Banta**

How did the Massachusetts's task force to address career readiness come about?

- The goal was a desire to define college and career readiness.
- CTE was stagnant in the 1980s and felt that it was exempt from the standards movement but as a state Massachusetts was slowly shifting the tide and CTE was becoming more and more rigorous.
- The task force's first iteration was an accountability board that was eventually abolished and became the task force to address career readiness. It was a 32 person committee including members of K-12, higher education, and industry. The goal was to discuss how to better integrate college and career readiness into K-12 education and come up with a definition of college and career readiness.
- The changing tides of assessments and standards also helped with the creation of the task force and having business involved helped to give the task force more credibility.

Why did the task force come about?

- All the other reform initiatives such as assessments and charter schools had captivated the attention of the K-12 board. There needed to be a clear sense of what it means to be college and career ready.
- Employers were saying that students didn't have the necessary skills.
- Massachusetts is number 1 on NAEP and PISA, and as a state had gotten complacent.
- They wanted to light a fire under the comprehensive high schools to shed more light on vocational programs, and give students direction and choice.
- The number of students requiring remediation also contributed.

How did you get these recommendations from policy to practice?

- The setting of goals was very important. The goal was to have 70 percent CTE awareness and emersion through paid internships. There were also goals around the number of students, companies, and schools participating.
- They created the data dashboard to track student's progress and improve longitudinal data.
- Massachusetts joined pathways in three regions to connect the community college, school district, and workforce board. The challenge after this was moving from regional changes to statewide changes. Here in Tennessee we already have an advantage as the governor is supportive.
- Through Clinton's School to Work Authorization ACT, Massachusetts put in a recurring line item in the budget for connecting opportunities. Through the workforce development board it pays for work-based learning for approximately 10,000 students.
- Massachusetts has the house chair support which was very important.
- Now they are thinking about how to diversity their approach to improve accountability and sustainability.

- A challenge has been to ensure that there are enough counselors to help students in the schools, but the continued role of business groups has been very important.
- Having multiple boards involved was important such as the statewide STEM council.

What advice can you impart to us?

- Consider how far does the governor’s reach extend?
- Tennessee is already a role model, what do we think are the best practices?
- Successful completion of college level work is the best predictor of postsecondary attainment.
- We should look into the early college model, and it’s even better if the early college is located on a college campus.
- Consider the idea that having both college and career readiness is an oxymoron if the focus is on careers requiring postsecondary. What surrogate word could you come up with for career?
- All students should have work experiences. Is there a way to have a certified assessment from an employer that a student could graduate with?

**Group Discussion**

Discussion on skills versus competencies:

Group 1	Group 2
<p>There are many similarities in the discussion of skills versus competencies from preparedness and readiness. In competencies how it is framed matters to students. You use skills to build competencies. Credentials can be signal of competencies or skills. For example a CNA is a signal of competencies and a Microsoft office certificate is a signal of skill. We need to discuss what does a high school diploma mean? Does it signal skills or competences? What should it signal?</p>	<p>Skills are checking isolated boxes and competences are bringing it all together. The skills are what our standards are measuring. Students can build competences through work-based learning and employment experiences. There is also an attitude and maturity piece involved in competencies. With high school students are we pushing them too far developmentally? We need to provide students with the opportunity to develop maturity. What are other countries doing to help build maturity?</p>
Group 3	Group 4
<p>Businesses are looking for the knowledge, skills, and abilities. Education has a role to help build those skills. Ability defines competency for a company. How do we develop competency if ability is the missing piece? Work-based learning is an important element to help tie skills together to help them become the competencies.</p>	<p>Two words that repeatedly came up in the discussion were value and contribute. Skills are building blocks to competencies that build the value for a company. Businesses need to connect skills with practice opportunities in order to help build competencies, therefore helping to develop value within their own companies.</p>



### **Closing Remarks from the Commissioner of Education, Candice McQueen**

Thank you to everyone for attending. We are in a very unique time with the passage of the Every Student Succeeds Act. We look forward to future meetings and the rich discussions that we will continue to have.



To: Members of the Career Forward Taskforce

From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education

Date: March 30, 2016

**Subject: Follow-up from meeting on March 24, 2016**

### **Meeting Overview**

The first meeting of the Career Forward Task Force was held on March 24, 2016, at the First Amendment Center in Nashville, Tennessee. The purpose of the meeting was to (1) frame the reasons for the development of the task force and its charge; (2) discuss the current Tennessee education and workforce landscape; (3) examine the work of Robert Schwartz on the Pathways to Prosperity report; (4) understand the IBM system of P-Tech schools; (5) learn from Massachusetts' task force to address career readiness, and (6) begin discussions of the definition of preparedness, readiness, skills, and competencies.

The meeting began with opening remarks from Commissioner Candice McQueen and round-robin introductions from the group. Commissioner McQueen charged the taskforce to "examine and explore ways to better engage students in their academic preparations, personal and social development, and workforce readiness; and identify overarching principals leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education."

Commissioner McQueen outlined that the question the task force will be working to answer are:

1. How do we know when a student is "career ready" at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
2. How do we ensure that students are progressing along a directed learning pathway aligned with the state's economic needs and employer needs at the secondary and postsecondary levels?
3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

### **Tennessee Landscape and the Broader Challenge**

Danielle Mezera, assistant commissioner of college, career and technical education, provided an overview of the current Tennessee landscape. As a state we have seen major progress in areas such as our graduation rate, improvement on NAEP and TCAP, and business accolades. The progress, however, has also experienced headwinds with Tennessee lagging behind the national average in postsecondary attainment and ACT benchmark growth. Tennessee currently ranks 36<sup>th</sup> nationally with an average per capita income of \$40,457 in 2014. As a state our postsecondary attainment is not currently increasing to match the projected workforce needs, especially in the area of STEM.

Nationwide the results highlight that there is a mismatch between the preparedness and readiness of students, and the expectations of the postsecondary and business institutions. Half of Americans reach their mid-twenties without the skills or credentials necessary for success in today's economy.



The goal of this task force is to help work within education to help support workforce development by partnering with higher education and business.

### **Preparedness versus Readiness Discussion**

Members of the task force we asked to assemble into groups to discuss the differences in the definitions of preparedness versus readiness. Across the groups preparedness was defined as the ability to “check all the boxes” such as freshman English and taking the ACT, but that preparedness was not synonymous with readiness. Readiness was described as the non-cognitive skills such as taking ownership, knowing why something was important, adapting, work ethic, and the application of skills.

### **Presentation on *Juxtaposition of Education and Industry National and Global Perspectives and Models Presentation***

Robert Schwartz, Professor Emeritus of Practice in Education Policy and Administration at Harvard Graduate School of Education and co-leader on the Pathways to Prosperity Network presented results from his work. Dr. Schwartz continued on the message began by Dr. Mezera that there is a mismatch in student readiness mentioning that 90 percent of students state that they are going to postsecondary but only 70 percent enroll in postsecondary, and only 50 percent attain a credential. The U.S. has been struggling with graduation rates and postsecondary attainment, especially in comparison to other developed countries; our growth has stagnated.

Dr. Schwartz discussed additional challenges that the U.S. is facing including: (1) underemployment or unemployment of students with a bachelor's degree, (2) postsecondary institutions not helping to prepare students for careers, (3) youth unemployment, (4) lack of growth in STEM certifications, and (5) students lack of knowledge of why they are obtaining a degree. The Swiss are helping to ameliorate some of these challenges by prioritizing vocational education and making sure that businesses are an integral part of education. As a state we should consider the expansion of the Pathways network to help guide students into postsecondary opportunities and careers that align with workforce needs and expanding early college schools.

Tennessee can leverage early career counseling, employer involvement in work-based learning, links between education and employers, and the commitment of state leaders to work help increase postsecondary attainment.

### **Presentation on P-Tech Schools**

Maura Banta, IBM Director of Citizenship Initiatives in Education, presented on the P-Tech model. P-Tech schools are innovative grade 9 to 14 public schools that create clear pathways from high school to college and career by partnering a high school, postsecondary institution, and industry. P-Tech schools came into existence as IBM realized that they had jobs that couldn't be locally filled and a lack of diversity in their workforce.

The P-Tech model provides supports for students so that they can graduate from high school in six years with an associate's degree. All students are expected to take a college credit bearing course their sophomore year. Students attending P-Tech schools are provided work-based learning experiences, an internship, a mentor, skills mapping, a competency-based education, and the





potential to work for the industry partner. The P-Tech model has expanded in New York thanks to support of the governor and is now expanding nationwide. The P-Tech system is working to support their youth but faces challenges when thinking through funding and how to keep momentum going in the schools. Task force member discussed the barriers to opening a P-Tech school in Tennessee which included challenges such as lottery money being unavailable to high school students, and the challenge of fitting in college credits and state high school graduation requirements.

### **Fireside Chat between Robert Schwartz and Maura Banta**

Danielle Mezera facilitated the fireside chat discussion on Massachusetts's task force to address career readiness. Robert Schwartz and Maura Banta had both been members of the task force asked to develop a statewide definition of college and career readiness. The 32 person committee was founded in response to the standards movement, disconnect between Career and Technical Education and comprehensive schools, and remediation numbers of incoming postsecondary freshman. Maura Banta shared that goal setting was a very important element of the task force as the goals combined with a data dashboard helped to shift the discussion from policy to practice. Robert Schwartz and Maura Banta suggested that we consider leveraging the governor's role, the early college model, and using our already strong experiences.

### **Skill versus Competencies Discussion**

Task force members rejoined their groups to discuss the definitions of skills versus competencies. Across the groups there was agreement that skills are combined together to form competencies. Skills are the incremental elements that students learn in school and then are combined together to become competencies through experiences such as work-based learning or employment.

### **Next Meeting Information**

We will meet again Friday, April 22 at the First Amendment Center to continue our discussion on postsecondary and career readiness. For additional information on the meeting please see the attached meeting notes document.

Thank you for your participation in the March meeting of the Career Forward Task Force. Please feel free to contact [Melissa.Canney@tn.gov](mailto:Melissa.Canney@tn.gov) with any questions you may have.

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## Career Forward Taskforce Meeting Notes

Meeting April 22, 2016

### Welcome by Commissioner of Education Candice McQueen

Reminder of the goals and recap of the last meeting:

- Charge of the task force: examine and explore ways to better engage students in their academic preparations, personal and social development, and workforce readiness; and identify overarching principals leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.
- The three questions the task force will be working to answer are:
  1. How do we know when a student is “career ready” at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
  2. How do we ensure that students are progressing along a directed learning pathway aligned with the state’s economic needs and employer needs at the secondary and postsecondary levels?
  3. How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?

From the last meeting task force members reflected that the issues of choice and how students make decisions, the role of counselors, the importance of defining college and career in other states, setting up a system to incentivize the skills we want students to have, the interaction between K-12 and higher education in preparing students, TNPromise mentoring giving a firsthand insight into the lack of first generation student knowledge around postsecondary, and the indicators we have to help show readiness such as chronic absenteeism stuck with them as important takeaways.

In May we will be diving into defining the “Ready Student,” review of Early Postsecondary, and discussing student transitions, Pathways TN, the role of Certain Adult Stakeholders (e.g. counselors), and ACT WorkKeys.

### Federal Education and Workforce Development Policies: Weaving together WIOA, ESSA, and Perkins presentation by Steve Voyteck, Government Relations Manager

- Workforce Innovation Opportunity Act (WIOA)
  - 2014 signed into law replaced the Workforce Investment Act
  - The goal of WIOA is to consolidate programs and align of federal workforce education programs
  - Four main titles:
    - Title I: Workforce Development Activities- for youth, adult, and dislocated workers

- Title III: Wagner-Peyser Act (Employment Services)
- Title IV: Rehabilitation Act of 1972 (Vocational Rehabilitation)
- WIOA key changes/themes:
  - Introduction of 5 key common performance metrics
  - Career pathways and sector strategies
    - Sector strategies bringing together sectors to share ideas and improve outcomes
  - In demand- prioritized from investment standpoint
  - The goal is economic self-sufficiency
  - Changes to the youth funding measures
    - 75% must be used for out-of-school youth (defined as ages 16-24)
    - 20% on WBL experiences, internships, or subsidized employment during the summer
- Every Student Succeeds Act (ESSA)
  - Replaces No Child Left Behind
  - The focus is on local and state autonomy and flexibility in the law's implementation.
  - Meant to improve and strengthen student achievement, focus on high needs school districts
  - States must establish "challenging standards," continues idea of standards based reform, and annual assessments in grades 3-8 and once in high school
  - Within ESSA it is allowable to have innovative assessment pilots which could include competency based assessments
  - States must have long term goals, accountability systems with five metrics, methodology for identifying and supporting low performing skills and publically reporting data.
  - ESSA overlap with WIOA and Perkins includes:
    - State and local plan coordination
    - The focus on "Well-rounded education"
    - All ESSA plans must coordinate with Perkins and activities in the workforce opportunity action
    - Intentionality around funding and connection points
    - Standards must be aligned with CTE and postsecondary entrance points
    - Emphasizing credential attainment
- Carl D. Perkins Career and Technical Education Act (Perkins)
  - Perkins is the sole federal investment in CTE and sets expectations for CTE across the country
  - Overarching purpose:
    - Program investment/scalability
    - Systems alignment
    - Be a bridge builder between ESSA and WIOA
  - Defining themes: integrated academics in technical coursework, accountability and improvement, links to business and industry, secondary-postsecondary connections, linkages to other programs (WIA/WIOA, ESEA/ESSA, and HEA)

- Weaving this all together
  - The order in which the federal acts were reauthorized shows a patten and a flow of ideas. WIOA followed by ESSA followed by Perkins followed by HEA (Higher Education Act)
- Where is federal policy going from here?
  - Postsecondary education is a necessity not a luxury
  - Systems alignment- intentionality in linking programs. Part of achieving this will be through states planning accountability. Performance private partnerships can also be involved.
  - Focusing on outcomes not inputs- incentivize desired outcomes
- Higher Education Act
  - Builds upon interest and ESSA and expanding early college high schools
    - Key point student transitions
    - If a student is exposed to postsecondary earlier that increases the likelihood of going on and persevering

### Group Discussion

Questions:

- 1) Understanding the expectations of WIOA, ESSA, and Perkins, which specific directives and/or funding purposes stood out to you most? And why?
- 2) How could these federal acts be utilized/leveraged in a coordinated fashion by the state in order to drive more purposeful postsecondary and career readiness of its citizenry? Initial thoughts on how it could come about or even if it should?

Group 1	Group 2
<p>1) It is good that there are clear, definable goals and how to specifically understand what the expectations are. We are concerned with additional accountability and how those will be measured. It is interesting that there is a shift to focus on out of school youth and the impact that will have on within school initiatives in place.</p> <p>2) Developing a regional and common goal is critical to make these all work together. We need to break out from just the LEA boundaries and define common goals with groups of different stakeholders. How do we move away from talking about inputs, and moving to outputs and outcomes? The language that is coming from industry is different from education, so bringing those sides together is critical. There is so much value in talking.</p>	<p>1) A common theme is a focus on outcomes of goals versus outcomes of siloed funding streams. With increased alignment we need to make sure that gaps don't perpetuate through all the programs. It stood out that the purpose of funding being for enhancing engagement for hands on experiences.</p> <p>2) We are already doing well in utilizing spaces and maximizing spaces in community. For example: Oakland high school opens its doors to mechatronics adult populations in the afternoon. We should not have to duplicate programs. The dollars saved can be shifted for transportation, daycare expenses. How do we promote that on the state scale? We need to have common metrics across the required laws to identify the barriers and react proactively.</p>

Group 3	Group 4
<p>As a state we need to work on providing guidance through ePlan and drive home how to put ideas together at the district level. Kathleen Airhart and Ann Thompson will work on tracking where the dollars are going. We also need to be thinking about “how do we get the dollars to teachers?” We should be taking advantage of WorkKeys to make sure that students are better prepared for work. Better spending of funding/planning between funding streams. Stop thinking in silos and don’t use funds in isolation. We need to pull external programs into school planning. We need guidance documents for districts. We need to understand where all the dollars are going- map it!</p>	<p>Work between TBR and TDOE is already happening Focus on outcomes is important over focus on input. Employment is a measure of success and ultimately economic prosperity. Two key levers need to be involved: industry expectations and sharing the knowledge that dollars are available. Incentives for counselors and capacity for counselor to help be the strong gatekeepers</p>

**State Economic and Workforce Development presentation by Ann Thompson, Director of Workforce Development at the TN Department of Economic and Community Development**

- TNECD
  - ECD does business development (new industry recruitment, existing industry expansion, and entrepreneurs). The work is 75% expansion and 25% recruitment
  - There are ECD 9 regions with a decentralized structure
  - The project management team works on supporting and bringing industry into Tennessee, with a huge amount of work on automotive
  - The other main initiatives are rural development and education alignment
- Focused on foreign and national direct investment, we are not just competing in TN we are globally competing
- Business climate
  - As a state we have a strong business climate with 130 + state parks and natural areas, 2<sup>nd</sup> lowest cost of living and 30.3% below the national average of housing pricing
- Tennessee was the first ever back to back state for economic development, which had never happened before
- Enhanced job tax credit- new program
  - Putting dollars towards industry moving into Tier II and Tier III communities
- Drive to 55 results: 80.8% retention at community colleges and 95% at TCATs
- Workforce 360: Collaborative between labor, 2-year, 4-year, business and veterans. The value added is in having everyone at the table at one time to make a decision.
- Center for Economic Research is a resource for the state

- Looking at age demographics of the current workforce, there are a huge number of people about to retire, “the grey wave,” without the current workforce to fill it in
- 2015 annual LEAP report: designed to ensure that postsecondary institutions are producing the skills and credentials that Tennessee employers actually need through alignment of education and industry.
- Disruption index- half of jobs in TN will be effected by automation- not going away but will need higher education to work there

### **“A Job Cures Many Ills” presentation by Commissioner Phillips, Department of Labor and Workforce Development**

- Department of Labor and Workforce Development
  - 60% of funds go to education and workforce development
  - Funds training in TCATS, state universities, community colleges, business and industries
  - Return on investment is \$1 generates \$38-\$58 dollars in wages and \$7.85 in taxes
  - Goals are to increase employment rate and implement WIOA
- Continual Learning
  - We want a strategy supply of high skilled workers but also want to have the capacity for innovation driven by a plentiful workforce at ALL levels
  - 80% of technology now in use will be obsolete in 10 years
  - TN has had huge increases in employment but there are still industry says they can’t find skilled workforce
- By 2020, only 20% of the labor force will come from U.S schools, 80% will be people who are already in the workforce
- Providing Innovative Viable Opportunities for Training- PIVOT
  - The goal is to talk to business as they can tell us what is needed
  - Example program: Toshiba 2-year program with Jackson State Community College. Students are paid and at school. Businesses provide training and equipment. Graduating students are working as advanced maintenance technicians (\$25/hour)
  - Example program: Lee University- accredited training site with Lipscomb University and TDOE. Employees can attend Lee and earn hours towards an applied science degree
- We have to look towards existing workforce, can’t get there only looking to students.

### **Employer Panel**

Panelists: Commissioner Phillips, Ann Thompson, Jeff Frazier Director of Eastman Chemical/RCAM, and Cal Wray, Executive Director Clarksville-Montgomery County EDC

- 1) What should be or can be the role of the employer and chamber of commerce in framing the optimal environment in order to obtain a workforce?
  - Jeff: Easy for business partners to be critical. Let’s talk about what we can do to make things better. It’s easy to point a finger. How can we be a partner? How can business join education?

- Cal: Chamber has a big umbrella, it can hit a spectrum of employers ranging from small business, hotelier, and industry. For so many years there was a disconnect in communications between business and education. We can bring a lot of people to the table and have a conversation.
- 2) Barriers, perceived or real, exist on both sides. When you think about the barriers, what are you seeing or hearing in terms of having that education to career pipeline / pathway?
- Jeff: Everything is changing, tech is changing. How can we design a curriculum when things are moving so fast? A barrier is that there isn't enough time. Malcolm Gladwell argues in order to master something it takes 10,000 hours. It takes time to become immersed in technology or a career pathway to become competent.
  - Cal: Manufacturing today is not the same as how it used to be, and people are having trouble shifting their perceptions. TCATs are coming back.
- 3) Business are saying "I don't know how to get involved, I can't take those kids because of age." They are saying I can only give you this much exposure, but we can't start at grade 13 to expose, as that's too late. There is a strange tension. How are you think thinking though the tension?
- Jeff: Companies will be forced into thinking through having clear objectives on how they have train employees. Eastman has apprenticeship program. We need solid knowledge transfer programs, especially with the new technology.
  - Cal: More companies are interested in internships/apprenticeships and realizing students don't have to be 18. We need to be exposing students in 6<sup>th</sup> grade, and unless we do that we won't have enough time.
  - Commissioner Phillips: A barrier is student awareness and the outcomes of their choices. Think about the examples from my presentation, Lee University and Toshiba working with Jackson State. Programs like that has to be done more and more and then pushed down to lower grades.
  - Ann: Businesses can take classes if they can't have students on the floor. Metal stamping is a great example of trying to find where you can bring students in while making sure to work with the OSHA standards.
  - Jeff: There have been cases of multiple employers in a high school physics class, bring the industry to the schools using employer volunteers. Dual enrollment is a huge opportunity.
- 4) If you could create an education to career pathway, what would that look like? What existing models would inspire you?
- Jeff: Switzerland as a model with their instructor involvement in education. If we work together we will figure this out.
  - Ann: German model is important to look to in getting students to roll towards something. Their system has no wrong way in or out. TN has got to figure out a way to take this to scale. It has got to be standardized to some extent so we can get around policy issues.
  - Cal: German apprenticeship model. We can't train on a case by case basis, we need to give employees mobility with a base set of skills and then those skills can be customized.
  - Commissioner Phillips: Industry now is the time to get involved. Unemployment rate is low. There needs to be a standardized base with foundational skills.

### **Secondary CTE in Tennessee presentation by Candi Norwood, Director of Student Success**

- CTE has four major units: Student Success, Talent Improvement, Student Leadership, and Work-Based Learning. Today's presentation is going to focus on Student Success.
- Historically CTE has been strictly skills-based, and the programs of study did not match regional opportunities with a minimal focus on postsecondary opportunities.
- In today's society careers are now no longer linear, there are no jobs that focus solely on skills or academics.
- CTE today involves a seamless transition model:
  - Start in elementary and middle school - awareness, high school
  - Active industry involvement starting in the early grades
  - Educate students on what their future looks like and having the support systems in place.
  - Ability to earn postsecondary credits or industry certifications in high school
  - Seamless transition for secondary to postsecondary
  - Multiple entry and exit points for 12-16
  - Opportunities for regional relevance
- CTE Career Clusters
  - Regionally chosen due to workforce development needs
  - 16 career clusters, 59 programs of study with 179 high school course offerings
    - Each POS has four levels of courses including WBL
    - Concentrator has 3 or more classes in a program of study
    - Lots of dual credit/dual enrollment opportunities
- There is a career cluster document created to share with stakeholders what is available within each program of study.
- We are currently in Phase III of CTE, measuring success of students with rigorous assessment options for all courses. Phase I was streamline our existing courses and programs of study and Phase II was to add relevant new courses and new programs of study, revise courses to align to higher student expectations.
- Going forward
  - Partnerships with TCATs, hope to have alignment with industry certifications.
  - Assessment opportunities at all levels.

### **Postsecondary CTE in TN presentation by Chelle Travis, Assistant Vice Chancellor of Student Services, Office of TCAT, TBR**

- The goal of TCATs is to provide quality technical education that is accessible and affordable and that the workforce development that meets the need of businesses.
- There are 27 TCATS, which are located within a 50 mile radius of every Tennessean
- TCAT's serve 30,000 students a year in 60 occupation programs statewide ranging in length from 4 months to 2 years.
- TCATs are open entry/open exit- students can exit once they have gained those competencies.
- 82.1% completion 87% placement in their chosen field 94.3% licensure
- Terms: Certificate (less than 1 year) and diploma program (1 year or longer)



- Drive to 55 (TNPromise) and LEAP has helped with marketing
  - 94.7% fall to spring retention rate and served 2,100 students
  - Dual enrollment has seen huge increase in students (33% increase)
    - The legislation changed so that students now get two free courses before it was \$300 towards courses
- Partnerships with Early Postsecondary Opportunities (EPSOs)
  - Industry certification
  - Dual enrollment pilot expansion
  - Dual credit expansion
  - Barriers: transportation, capacity, equipment, funding
- TCATs are working on new student information systems and a new business process modeling across TCATs to create common processes, which allows for better data

### **Tennessee Community Colleges presentation by Michael Tinsley, Perkins Coordinator, TBR**

- The Complete College Tennessee Act and Drive to 55 are striving to reduce the cost to completion, reduce time to completion, and align credentials with employer needs.
- Remediation redesign:
  - SAILS- Postsecondary in secondary world (helping to get students below a 19 ready for math)
  - Co-requisite- before only 5% of students who entered as remedial students persisted
    - Take college math class and foundational basics at the same time as credit bearing course
    - Changing success rates
- Academic alignment redesign:
  - TN transfer pathways
  - Career program alignment
  - Reverse articulation- credit for work that has been done
- Structured interventions
  - TN Promise
  - TN LEAP
  - Intrusive advising
- Community College completion facts:
  - 94% certificate seeking students
  - 93% of students who get an AAS are placed in 6 months

### **Tennessee's Model for Work-Based Learning (WBL) presentation by Chelsea Parker, Executive Director of Work-Based Learning and Blake Shearer, Coordinator High School Interventions and Transitions**

- The goal of work-based learning is to provide opportunities for career awareness in addition to allowing student to work alongside industry and apply what they are learning in the classroom in a workplace, and to provide the company with value.
- WBL model:
  - Progressive exposure and experience model. K-J (Kindergarten-to-Jobs) model

- Industry and career awareness has to happen early. Career exploration is students participating in job shadows, interviews, and competitions to help them explore interests that best fit them. Capstone level work is more long term paid work experiences, coops, and apprenticeships.
- TDOE has worked hard to set a foundation. This started with statewide assessment of need, as well as revision of the WBL framework, standards, and training model. This year we have been implementing a full statewide roll out have trained 840 teachers.
  - There is a WBL Leadership Council that provides training and shares best practices
- All means all focus:
  - No harm in assuming all students should be competitively employed
  - WIOA has helped in supporting integration of students with disability in WBL experiences
  - Sheltered workshops are shutting down. Districts are providing courses for students to get intro knowledge and skills for WBL and supporting teachers with PLCs.
- Baseline map of WBL:
  - 10,500 students participated in capstone WBL experiences with 500 teachers. Huge demand. Trained 850 teachers this year.
  - Readiness by district varies greatly.
- The next steps are to track the breadth and depth of student experiences. We are working on pre- and post- assessments and preparing a culture of career readiness. School climate indicators will help to see if students are being prepared. We need to better track the early experiences. We all need to measure the return on investment for industry partners and for the broader impact.

### **Postsecondary and Secondary Panel**

Panelists: Candi Norwood, Chelsea Parker, Blake Shearer, Chelle Travis and Michael Tinsley

Can working on the school yearbook be viewed as WBL?

- There are strong models of school-based enterprise, and students run that. Yearbook can be strong when it's treated as a business model (e.g., includes fundraising and other business practices), or it can be a superficial experience, which we would not promote. You have to be careful about identifying that.

Is the state doing anything to solve the transportation problem?

- Funding is at the local level. Dual enrollment has been brought to the campus. Five community colleges have middle colleges (For example: Pellissippi State)

What are the barriers?

- Funding sources. For example: Perkins- all those plans needs to be a regional unified plans. CTE directors are working on their Perkins funding plans are separate from school improvement grant and other planning/funding sources. It should be a regional or unified experience.
- Parents of students with disabilities push back with misconceptions "I don't want my children to work as they are going to lose their benefits." We need to make sure that parents understand the reality. 83% of families want their student with disabilities to be in employment.

- Educators don't understand their connection to the industries.

### Group Discussion

Questions:

- 1) What salient points stood out to you from the State and Employer Session? And why?
- 2) What stood out to you from the Secondary and Postsecondary session? And why?
- 3) Discuss *Meandering Toward Graduation*. What did you flag/underline and why?

Group 1	Group 2
<p>We want to make sure we are strategic and forward thinking in our plans. What will it look like in 10 years? How can we provide foundational elements to help teachers be prepared?</p> <p>A barrier is student awareness of opportunities. Use TN Promise idea of mentors 1:1. Connect mentors to help students to know what they will need in the workforce (and start it in the early grades.)</p> <p>TN Promise was the big idea and the message was simple and increased awareness. Can we do the same thing with early workforce. The mentoring component was HUGE, use the model for career and college pathways.</p>	<p>A barrier is transportation and limited access. School buses could teach courses while on route. Equipment should be mobile but with a systematic integration to curriculum not an add on.</p> <p>We need to leverage the summer break for WBL experiences.</p>
Group 3	Group 4
<p>How can we ensure students are ready and businesses know they are ready? We should have all juniors take WorkKeys and ACT, and have it on the diploma. Use Title I funds. We should utilize ECD and labor to get businesses in front of schools and then lean on Community Colleges and TCATs to offer aligned courses.</p>	<p>School culture is important in supporting soft skills. There should be CCR indicators that are reported. There should be high school level accountability for college and career readiness indicators.</p> <p>We need to make sure we are getting resources like jobs for TN into teachers and counselors hands and embedding it into trainings.</p>

### Closing from Commissioner McQueen

- Thank you for your time and for engaging in today's rigorous conversations.
- Reflection from today's session to carry forward to next time:
  - Counselors role
  - Transportation as a barrier as something we need to consider regionally and statewide
  - How to connect high school experience with postsecondary
  - Soft skills- how are we defining it? How do we make sure it's just not a school responsibility?
  - Idea of equipment on wheels
  - Statewide data only 2% of high school students go directly into a TCAT

- We have the right people at the table, and that is very encouraging, but we need more academic teachers at the table. It is encouraging to hear about the willingness of the business community, there is a facilitation piece that needs to be thought through (matchmaking)
- For the final report recommendation categories are starting to emerge: state, higher education, local community districts, and businesses. In the report we need to be cognizant “are we incentivizing the right behaviors” and how do we respect the local nature and differences in education.



To: Members of the Career Forward Taskforce

From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education

Date: May 3, 2016

**Subject: Follow-up from meeting on April 22, 2016**

### **Meeting Overview**

The second meeting of the Career Forward Task Force was held on April 22, 2016, at the First Amendment Center in Nashville, Tennessee. The purpose of the meeting was to (1) learn about recent federal activity and acts, focusing on WIOA, ESSA, and Perkins; (2) discuss how these federal acts can be utilized/leveraged to drive more purposeful postsecondary and career readiness; (3) examine state economic and workforce development; (4) understand the current state of Tennessee's secondary and postsecondary career and technical education and work-based learning; and (5) discuss salient points from the day and how they can help to drive the forward facing recommendation.

The meeting began with opening remarks from Commissioner Candice McQueen. Commissioner McQueen reviewed the charge of the taskforce to "examine and explore ways to better engage students in their academic preparations, personal and social development, and workforce readiness; and identify overarching principals leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education."

Task force members reflected on salient points from the last meeting including the role of counselors and the interaction between K-12 and higher education in helping to prepare students. Commissioner McQueen outlined the future discussions of the task force. In May the focus will be on a deep dive into defining the "Ready Student."

### **Education and Workforce: Recent Federal Activity and Acts**

Steve Voytek, Government Relations Manager, provided an overview and discussion of the connections between the Workforce Innovation Opportunity Act (WIOA), Every Student Succeeds Act (ESSA), and Carl Perkins Career and Technical Education Act (Perkins).

The goal of WIOA is to consolidate programs and align federal workforce programs and it does this through the administration of four major titles. WIOA shifts from the previous workforce act in that it introduces common key performance metrics, requires that 75 percent of youth funding must be spent on out of school youth ages 16-24, and prioritizes sector communication on common outcomes.

The goal of ESSA is to improve and strengthen student achievement. ESSA replaces No Child Left Behind but keeps the major tenet of challenging standards. ESSA prioritizes state and local autonomy and flexibility in the law's implementation. ESSA overlaps with WIOA and Perkins in the focus on a "well-rounded" education, and the importance of coordination.

Perkins' overarching purpose is to provide CTE program investment/scalability, systems and alignment, and bridge ESSA and WIOA. Perkins is the sole federal investment in CTE and sets expectations for CTE across the country.

Federal policy is shifting to the stance that postsecondary education is a necessity and not a luxury, and stressing the importance of overlap and using funds wisely across different avenues to maximize its potential benefits.

### **Group Discussion of the Federal Acts**

Members of the task force were asked to reflect on the federal acts and how they can be utilized/leveraged to drive purposeful postsecondary and career readiness. Across the groups the importance of collaboration and integration across sectors was mentioned repeatedly. The more we can work together the greater number of people can be supported and the more wisely money can be allocated. The shift to a priority on spending WIOA funds on out of school youth resonated with groups as being a potential challenge as we also need to be thinking about supporting our in-school youth.

### **State and Economic Workforce Development Presentation**

Ann Thompson, Director of Workforce Development, provided an overview of the Tennessee Department of Economy and Community Development (ECD). ECD supports business development including new industry recruitment, existing industry expansion, and entrepreneurs. As a state we have a strong business climate, receiving the accolade of being the first ever state to be the first ranked state in economic development two years in a row. Given that over half of the jobs in Tennessee will be affected by automation, requiring employees with higher degrees and credentials, we need to be strategic in how we are supporting business, and we have already begun with initiatives such as Drive to 55 and Workforce 360.

Burns Phillips, Commissioner of Labor and Workforce Development, provided an overview of the Department of Labor and Workforce Development. Sixty percent of funding goes towards education and workforce development with a return on investment of \$38-58 in wages and \$7.85 in taxes for every \$1 invested. By 2020 only 20 percent of the labor force will come from schools, the rest will be from existing the existing workforce so it is imperative that businesses have a strong internal training and support plan.

### **Employer Panel**

Jeff Frazier, Director Eastman Chemical/RCAM and Cal Wray, Executive Director of Clarksville-Montgomery County EDC joined Ann Thompson and Commissioner Phillips to answer questions on the employer perspective. Panelists stressed the importance of communication and alignment to make sure that education is helping to prepare students for today's workforce. Switzerland and Germany were mentioned as countries that have a strong system of business and education alignment that we could look towards.

### **Secondary and Postsecondary in CTE**

Candi Norwood, Director of Student Success, presented on CTE in Tennessee. CTE has shifted dramatically from being a skills-based program for non-college bound students to a seamless transition model. The model starts with career awareness in elementary school and grows to multiple entry and exit points for grades 12-16. The sixteen career clusters provide students with an opportunity to dig dipper into a program of study aligned with regional workforce needs.



Chelle Travis, Assistant Vice Chancellor of TCAT Student Services at Tennessee Board of Regents, provided an overview of the Tennessee Colleges of Applied Technology (TCATs). The goal of TCATs is to provide a quality technical education that is accessible and affordable and that the workforce development meeting the needs of businesses. There are 27 TCATs that serve 30,000 students a year in 60 occupations. Students can earn a certificate or a diploma with the option of multiple entry and exit points. TCAT's had a 94.7 percent retention of TNPromise students from fall to spring semester and has also seen a dramatic increase in the number of students participating in dual enrollment.

Michael Tinsley, Perkins Coordinator at TBR, presented on the Tennessee Community Colleges. There are currently three major initiatives underway to help support students in community colleges (1) remediation redesign, (2) academic alignment redesign, and (3) structured interventions. The remediation redesign is helping to increase the number of students who persist past remedial courses and gain college credit.

Chelsea Parker, Executive Director of Work-Based Learning, and Blake Shearer, Coordinator of High School Interventions and Transitions, jointly presented on Tennessee's model for work-based learning. The goal of work-based learning is to provide career awareness and exploration in addition to allowing students to work alongside industry and apply what they are learning in the classroom to a workplace, and to provide the company with value. Tennessee has worked hard to lay a strong foundation for work-based learning and this year rolled out a statewide training for teachers. Work-based learning is inclusive of all students, as students with disabilities are capable of being prepared for the work force.

### **Postsecondary and Secondary Panel**

Candi Norwood, Chelsea Parker, Blake Shearer, Chelle Travis, and Michael Tinsley answered questions from the task force about secondary and postsecondary CTE. Barriers to CTE included how to ensure alignment of the different funding sources, and parent and educator misconceptions about today's workforce.

### **Group Discussion**

The task force broke into groups to discuss their thoughts on today's salient points and stand out elements from the pre-reading *Meandering Toward Graduation*. For some groups the conversations of barriers continued with discussions of travel, awareness of opportunities, and limited student access. Additional groups discussed the possibility of mentorship, building culture within schools, and getting resources into the hands of teachers.

### **Next Meeting Information**

We will meet again Wednesday May, 25 at the First Amendment Center to continue our discussion on postsecondary and career readiness. For additional information on the meeting please see the attached meeting notes document.

Thank you for your participation in the April meeting of the Career Forward Task Force. Please feel free to contact [Melissa.Canney@tn.gov](mailto:Melissa.Canney@tn.gov) with any questions you may have.



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## Career Forward Task Force Meeting Notes

Meeting Date: Wednesday, May 25

### Welcome from Commissioner McQueen, Tennessee Department of Education

- Reminder of the Career Forward Task Force charge:
  - Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
  - Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.
- Recap of the task force guiding questions.
- We also need to make sure that we are considering secondary, postsecondary, and business needs.
- We have data on whether students can pass tests, but we don't have information on whether students are responsible and have the transferable skills to be successful.
  - Employers want intelligent, academically gifted people who also have a good attitude, are problem solvers, are responsible, and ready to show up on time.
- High-level takeaways from previous meetings:
  - "Career-ready" must be meaningful, rigorous, and relevant for students.
  - Employer engagement in a student's learning pathway must be robust.
  - There are multiple learning models, but what are the right levers?
  - Federal legislation can be a game changer.
  - Student readiness measures cannot predict success if they are not aligned by both process and outcome.

### Tracking Student Trajectories Over Time by Jonathon Attridge, Research Analyst, Office of Research and Strategy

- 9 out of 10 students, who enter a Tennessee high school, graduate. We are outperforming the national average.
- When the class of 2014 left high school, 58 percent went on to attend a postsecondary institution. In 2015, 62.5 percent of students enrolled in postsecondary.
- Economic and Community Development studied student outcomes over time. A student with an associate's degree earns \$5,941 more per year and \$18,860 more per year with a bachelor's degree, compared to a graduate with only a high school diploma.
- Today's plan:
  - How to keep students on track and how to catch up students who are behind.
  - There are four major points of leverage:
    - 1) Elementary Reading
      - Early literacy is a priority of the department.

- The majority of Tennessee students are not reaching proficiency in reading, and too few who are behind are able to catch up. State standardized ELA assessment scores are stagnant across all grades.
  - Fewer than one in three economically disadvantaged students are reading on grade level.
  - Less than three percent of students who are below basic in third grade reach proficiency by fifth grade. Only eight percent of students who are below basic reach the ACT college ready benchmark in reading.
- 2) Eighth grade math course access
- Eighth grade is a critical time in a student's postsecondary/career planning.
  - Eighth grade Algebra I offering impacts achievement and future course options for those students who take it.
  - 70 percent of students who take advanced coursework in high school took Algebra I in eighth grade.
  - Of note, similar students academically – in seventh grade - faired differently on PLAN, EXPLORE and ACT, where the only difference was taking Algebra I in eighth grade.
  - Most prepared students do not have access to Algebra I in eighth grade- the number of districts offering this course option has decreased over time.
  - The number of Algebra I course offerings has declined perhaps due to supply of teachers and/or accountability. Task force members noted that standards change had an impact.
  - Commissioner McQueen: There were some disincentives built into the accountability model. We made corrections this year in the accountability model. U.S. DOE would not let students be double counted in eighth and ninth grade Algebra I, which led to a disincentive to offer higher level math in 8<sup>th</sup> grade.
  - High correlation between students who are behind on math being also behind on reading.
  - We can track how many students are in a course but not their preference or demand for courses.
  - The department is communicating with districts the changes in accountability.
- 3) Ninth grade course success
- Ninth grade is an important transition year for students, success in ELA and Algebra I is highly predictive of high school success.
  - 43 percent of ninth grade students were on grade level.
  - 11 percent of students not on grade level are chronically absent compared to 2 percent of students on grade level. Chronically absent

is missing 18 days or more in a school year. Suspensions are counted in chronic absences.

- The department has been thinking about exclusionary discipline. Four percent of students on grade level were suspended and 20 percent of students not on grade level were suspended. The majority of discipline incidents are due to violation of school rules.
  - Students who are suspended miss two days of school on average.
  - The department has attendance and behavior data available by student subgroup.
  - Nearly all students who were behind in the 9<sup>th</sup> grade also perform poorly on the ACT. We are remediating too late.
  - On track in ninth grade, 79 percent enroll in postsecondary compared to only 37 percent of students not on grade level (2014 graduating class). The data in this data set is the year before the promise data.
- 4) Early Postsecondary Opportunities (EPSO)
- We began the conversation about EPSOs with P-tech schools and Massachusetts presenters during the March meeting.
  - Menu of the top five EPSO options in Tennessee includes: International Baccalaureate (IB), Local Dual Credit, Statewide Dual Credit, Advanced Placement (AP), and Dual Enrollment (DE).
  - CTE is working on collecting industry certification data.
  - AP and DE are the most popular EPSOs.
  - 25 schools account for 50 percent of APs, dual enrollment is more pervasive.
  - Action item: Crosscheck if schools in AP Exam Fee Pilot program are the big AP schools.
  - While 80 percent of high schools offer EPSOs only 40 percent of students graduate with an EPSO credit. Only 55 percent who scored above an ELA benchmark on PLAN attempted an EPS course.
  - Students who are not economically disadvantaged are over twice as likely to take an EPS course. Financial barrier has largely been removed, so there are other factors.
  - We have anecdotal evidence that there is a tension with teachers between requirement and voluntary taking of assessments.
- Final thoughts
    - We need to keep students on track and proactively identify students who are falling behind and provide personalized supports.
    - We need to increase our access to data.
    - Focus groups have been happening with students across the state. One of the things that is most interesting is that students don't know what is offered at other schools.

- Learning and awareness means we can think about the systems and structures in place.
- Question: Can we look at policies that districts have in place around access, absenteeism, and discipline? For example: policies on supportive discipline with data.
  - Question: Why are students who score above readiness level on PLAN are not accessing EPSOs?
    - We are working on compiling that information right now.
  - Question: We have fixed the accountability problem for 8<sup>th</sup> grade math so what is being done on communications?
    - We have it in the new accountability model, districts gave feedback. Information is now trickling down, but we can talk about it more.
    - The department is offering an online blended learning pilot, we have room for 30 more teachers.
  - Students who struggle in ELA are harder to catch up than students who struggle in math. We are looking into a portfolio option for districts and 2<sup>nd</sup> grade screener. We need to address it early.
  - The lifecycle of a student starts in PK or K. We need to think holistically about how students are doing along the course of their career.

### **Student Assessments by Nakia Towns, Assistant Commissioner Data and Research**

- TNPromise has made a K-12 free public education system a K-14 system.
- Especially given TNPromise, we need to think through how we are preparing students.
- Goals of the new assessments: better information on postsecondary readiness, alignment, and TN input
- Key difference (from previous TCAPs): variety of test item types beyond multiple choice, rigorous expectations for proficiency (this year in high school we are setting cut scores), transparency with practice tools and blue prints.
- Current Assessment Landscape
  - Grades K-2 will offer a 2<sup>nd</sup> grade assessment, no longer SAT 10 for K-2. There will be a focus on literacy and numeracy
    - ELA balance of fiction and non-fiction texts, and have the ability to do short writing passages and editing, reading comprehension, fluency (reading in a couple of minutes and ask if a statement is true or false).
    - Math focus on numeracy
  - Grades 3-11: Math and ELA assessments. Multi-State Alternative Assessment (MSAA) for students which severe learning disabilities, ACCESS for English language learners
  - Working on updating science and social studies standards.
  - ACT/SAT
    - EOCs and ACT/SAT have different purposes. EOC is Tennessee-specific and measures the depth of knowledge for a particular grade level and content. ACT is a national benchmark; it is a snapshot of a cumulative career.
    - ACT/SAT play part of our TN Succeeds goals.

- ACT/SAT is being added to state accountability as it is listed in state law.
- As a state we have seen improvement with graduation rates, but not with aligned ACT/SAT scores.

### **Student Readiness by Casey Haugner Wrenn, Executive Director of Student Readiness and Early Postsecondary**

- Effective student pathways contain the following elements: EPSO, capstone experiences, integration with counseling, and seamless transitions. Selecting your pathway is important earlier than junior year.
- Student Planning
  - T.C.A. all middle school/ 9<sup>th</sup> grade students should take a career interest inventory. Summary data should be shared.
  - State board policy: students are required to have a focused plan of study for high school.
  - A lot of interest inventories are available, some free and some with cost.
  - Our belief/ vision: earlier career interest inventories can benefit students in middle and high school. Student plans should be reviewed and updated annually, and retaken in high school to align with career interests.
  - Challenges: students being mismatched with interests and achievements.
- Capstone Experiences
  - We want all students to have a capstone experience to practice and demonstrate their knowledge and skills in real-world setting.
  - Capstones are encouraged by state board. Graduating students are able to qualify for “state distinction.”
  - Our belief/vision: all districts should offer a capstone experience aligned with local and regional workforce opportunities.
  - Challenges:
    - districts are not required to offer capstones
    - gaps exist in course-taking patterns across different student subgroups (economically disadvantaged status, race, disability, etc), d, even with equal academic achievement
    - logistical barriers such as transportation, and
    - students aren't progressing along the pathway early enough to take advantage of capstone experiences.
- EPSO
  - EPSO opportunities allow students to become familiar with postsecondary expectations, develop confidence and skills, make informed decisions, and decrease time and cost in completing a degree.
  - There are eight types of EPSOs across the state. Some are a course, some are a course and an assessment, and some are just an assessment (capstone industry certification).

- Statewide dual credit is a great partnership between Tennessee secondary and higher education institutions, and is specific to TN.
- TN students, who participate in EPSOs, are more likely to enroll in postsecondary and persist in postsecondary.
- Our belief/vision: all high schools should offer a portfolio approach of early postsecondary opportunities, and all students who are ready should take advantage. If you are academically ready you should be taking advantage- access is not enough.
  - Portfolio: important as not all of our students look the same and have the same interests. It is important to provide EPSOs that match student academic levels and interests. For example: a student intending to enroll at a four-year university may want to take AP calculus, but a student interested in a Tennessee Transfer Pathway may want DE for college algebra.
- Challenges: no uniform EPSO acceptance policy across state (although uniformity across TBR institutions), limited funding for expansion, low numbers of students taking the exams, and low pass rates.
- School Counseling
  - TDOE has recreated the position of Coordinator of School Counseling, Leigh Bagwell is doing a great job.
  - We are not necessarily seeing alignment with law/policy and what counselors are doing on the ground. Counselor standards were last updated in 2005, we are working on updating now.
  - Academic, social and emotional, and college and career are the three counseling domains. College and career is getting less time in counseling preparation programs and in schools.
  - Our belief/vision: effective communications plan, create school counselor advisory council, revise standards, share strong practices from the field, and provide robust professional development.
  - Challenges: high student-to-counselor ratios, school counselor funding, counselors are being asked to do things that are not in their training.
- Student Transitions
  - TDOE has an internal team thinking through the appropriate student milestones and how to support districts in ensuring smooth transitions for students.
  - We want to make sure we are support districts in thinking through a holistic view of students.
  - Our belief/vision: ensure districts have tools to effectively assess needs and intervene appropriately.
  - Challenges: no definition of readiness, lack of non-cognitive data, initiatives at the TDOE are implemented separately and are not perceived to be integrated by districts.

### **WorkKeys by Debra Lyons, Sr. Workforce Advancement, ACT**

- Donna Mason is the ACT client relations manager for Tennessee

- Not a discreet finish line, data driven, and capstone are great things we have heard today
- National Career Readiness Certificate (NCRC) WorkKeys
  - Portable, industry recognized credential
  - Industry recognized, embedded in industry stackable credentials
  - 13,000 employers recognize NCRC nationwide
  - Focuses on: problem solving, critical thinking, locating information (read a graph and make an accurate decision).
  - Three assessments: applied math, locating information, reading for information. Those three skills are core in 80 percent of jobs.
  - 18 percent were at a gold level, ready to be trained for 93 percent of jobs in the country. Gold level is eligible for college credit.
- Career Readiness: the skills and proficiency levels needed for a specific career cluster
- ACT is working to create communities of work and career readiness
- 2020 Employment projects document provided
- Work Ready Communities
  - Aligning jobs into clusters
  - Initiatives in western and eastern TN: Caterpillar, Eastman Chemical
- Symposium in Nashville Sept. 19 and 20

### **Questions for Nakia Towns, Casey Haugner Wrenn, and Debra Lyons**

- What is TN's ACT/SAT compared to the nation?
  - Public school student average is 19.4, which is below the national average.
- Is there a comparison nationwide for TCAP/EOC?
  - There is not comparison as it is a state-specific test.
- Is EOC given more teaching time as most students don't go onto postsecondary?
  - We have a tiered approach to make sure students have what they need at each grade level and content area. The standards do prepare for the ACT but with a deeper individual assessment with our EOCs.
  - SAT/ ACT are not science or social studies content but more the skills.
  - TVAAS provides projections on ACT based on 8<sup>th</sup> grade TCAP scores. We are building projection models.
  - TN standards build up to the rigor.
- WorkKeys is a valuable tool, but there is a cost. How are districts and states funding it?
  - Some states are moving into a career readiness indicator coming out of high school. For example, Michigan and South Carolina. Chamber of Commerce and ECD have paid for students to take WorkKeys in some places.
- What's the cost of WorkKeys?
  - \$50 for a NCRC certificate, but depends on the pricing negotiated with each institution
- Is there plan to rewrite the word "encourages" in state board policy for capstones?
  - Legislation is used as the authority. State board is doing a comprehensive review right now. Would changing the word to mandatory lead to a cost than that could

- have a challenge. The taskforce should consider giving a recommendation on changing the wording.
- How many LEA's have a capstone?
  - About 80 percent offer EPSO, which is a capstone. This is a complex answer. For example, a transferable industry certification is considered a capstone.
- Industry certification? How do you determine that they are the ones valued by employers?
  - We first look at industry certifications available and then ask state and national industry partners if they are valued.
  - Second look, call industry members and TCATs to see alignment. Also look into postsecondary and where things are transferable.
  - We need to work on working more with our community college system.
- Important to keep an equity focus lens.
  - Our goal to raise standards is the biggest equity play we have made.
  - High school experiences look very different based on where students go to school. We want all of our students to be able to make their own choices.
- Commissioner: I get asked a lot why do you make all students take ACT? We do that for the equity question, we want to empower students to take the pathway of their choice, we need to be sure they are prepared, regardless of choice. Students need to be both college and career ready. That is what we are trying to determine. We do not want to go back to a system of tracking. We want to give students skills that are flexible.

#### **Student Panel moderated by Commissioner McQueen**

- Brooklyn Stephenson, Macon County High School, Volunteer State Community College, will transfer in TN tech
  - Bachelor in Nursing
- Juanita Gomez, Lebanon High School, TCAT Nashville
  - Majoring in Admin Office Technology Program
- Catherine English, Overton High School, Vanderbilt
  - Majoring in Secondary Education, Biology?
- America Leon, Overton High School, Nashville State Community College
  - Majoring in Photo Journalism?

How did your high school experience prepare or not prepare you? (America)

- At the beginning of high school, I was the student from the earlier slideshow who missed many days of school, and I was not prepared, not on grade level
- Junior year teachers had kept a close eye on and said they would prepare me for, and helped with what career I wanted to go into
- Now have options based on being prepared

How did your high school experience prepare or not prepare you? (Catherine)

- 10 AP classes and valedictorian
- At Overton didn't have to try but getting to Vanderbilt had to learn to study very quickly



- Not totally ready in other aspects outside of academics
- Teachers were extremely supporting and shared information, but I was not ready with study skills

How did your high school experience prepare or not prepare you? (Juanita)

- Did not feel ready at the TCAT
- As a Hispanic her parents didn't necessarily support her continuing her education
- Counselor helped to embrace and enlighten, suggested SkillsUSA
- TNPromise gave access to the finances

How did your high school experience prepare or not prepare you? (Brooklyn)

- High school was easy but wish I'd done DE
- Postsecondary was like a ton of bricks all at once

Did any of you take a CTE course? If so what was it?

- Catherine: In MNPS get freshman academies, I chose the engineering academy. I have always known I wanted to go into education but there was no academy. Basic skills from CTE and WBL are still there. Collaboration and problem solving are transferable skills.
- America: Information Technologies academy, worked on coding, building websites. It's not the field that I'm in but tech is advancing so rapidly. Photographers need experience with websites. I feel prepared, prepared for teamwork and real life. Hispanic women face the challenge of being a woman of color and knowing about coding it gives an empowerment.
- Juanita: Culinary Arts helps with preparing food and how you present yourself with others. It didn't help with postsecondary, CTE was more a just a class but not skills based help on going to college.
- Brooklyn: We had an elective focus, took family and parenting and child development as going into nursing. In FCCLA all four years of high school. Helped to work with children or people in general.

Did you have WBL or job shadowing?

- Catherine: LP building, day in a life an engineer. Further confirmed I did not want to be an engineer. Dr. Airhart toured and now I am an intern with the department.
- America: Journalism course had the opportunity to be senior editor. Worked with Nashville sounds, Tennessean. Narrowed that I wanted to do photo journalism. It lets you know if your interest aligns and eliminates changing pathways.
- Juanita: Didn't know about internships, didn't know if there was one. Job shadowed at high school. Job shadow as a sense of the workforce.
- Brooklyn: Seniors could do service-learning. I went to a daycare and a hospital. Helps prepare for see what you do and don't want to do. Help to see that I wanted to be a nurse.

Ann mentioned our high school students don't have as many summer jobs as they used to and so internships in school are more helpful. Did you have afterschool or summer jobs?

- Catherine: Two jobs
- America: Single mom and two younger siblings. Working since 6<sup>th</sup> or 7<sup>th</sup> grade. Catherine is part of the reason I graduated. I would come in tired working. Work 60 hours a week and go to school full time. Every day I say “my mom was not tired and got up and went to work so should I.” Every time we wake up and say we are going work hard today. Challenges won’t stop us. We want you to hear our voices. One educator told me I wasn’t going to go to college. You guys break my heart because I see that there are those who care. You don’t only care about the paycheck you care about making a difference.
- Juanita: Worked all through high school. Hispanic culture is a priority on working and better education. First in her family to pursue college. Worked to help her mom as she helped me. Would babysit teacher’s kids. Teachers want better for students as they know how you feel. Focus on work to help her mom. High school as a stepping stone to make more money.
- Brooklyn: Worked at sonic as a car hop. Hard to study and work at the same time. Made more appreciative of the things I have. Confident that I have better job and people skills due to the jobs.

If you were to give this group advice what could we do to better prepare students for college and career?

- Catherine: Don’t rely too much on what you are labeling things. If you just change the label it doesn’t change anything. Can’t just implement the same system and call it something different. Be aware of the limits of data and how far it can reach.
- America: This is the beginning. In my community many students don’t see hope. I am the only girl in my apartment doesn’t have a kid. I work with undocumented students who lose hope. Knowing that people are paying attention gives hope. Everything you do is amazing. It takes two teams, team 2 is the community, the parents. TN is becoming so diverse. Don’t be afraid of change. Get involved more with the community. Let’s have a town hall where more opinions are shared. Parents have to be involved as well. My mom was not supportive. My mom only came to the school at graduation. Students need to know that they have to do homework at home.
- Juanita: Get to know students by heart and by how they feel. Adults don’t know how much difference they can make. Teachers focus on students who already have an advantage and who are in clubs or honors classes. There needs to be more focus on those who have the challenges. Those who aren’t identified as “college material” and time isn’t put into them. All students can and should go into postsecondary. CTE needs to be communicated as a postsecondary avenue.
- Brooklyn: More studying techniques in high school. I learned from the failures but it would help to be prepared.

EPSO, what EPSOs did you take and did it help prepare you?

- Catherine: 10 AP courses over the course of high school. HS offered 12. Content wise the AP Statistics was the most transferable. Vanderbilt didn’t accept calculus so had to take it again.

Overton is now implementing Cambridge. Culture of the school was AP English language, DE, and standard English. Smart students were placed into AP, then next into DE, and then those who are left into standard. We were hearing it's about what students need and that was not communicated at the school level.

- America: Didn't know about opportunities for AP or DE, no one communicated that it was an option. No one said let's do a challenge. Need to give the option everyone not just smartest.
- Juanita: Teachers label students based on smartness or disciplined. No opportunity based on grades. Students could go farther based on their specific needs. Everyone can if they set their mind to it. Could have had more options.
- Brooklyn: DE was offered but didn't take it, wish I had.

How well planned do you think you were in high school for your pathway? Did you take a career inventory?

- Catherine: Yes, I took a career inventory. It said that I am good with people and numbers, which are on opposite ends of the wheel. Middle school saw counselor once. In high school went to see counselor every day. Helped talk through PLAN score and helped with academics. Gave AP options and talked through the plan and doing the socio-emotional part. Support doesn't want her to be teacher. This semester had to rely on people from high school to pull together when I needed them most.
- America: Never talked to about college. Middle school is now a charter school. Never met with counselor, never given opportunity. No plan in high school for classes, someone else picked. Freshman seminar helped for the rest of high school. Teachers have to find resources on their own. Became close friends with all counselors. Counselors and teachers need to work together, teamwork is important.
- Juanita: Middle school the focus is just getting to high school. High school just picked on my own. I thought a counselor was discipline focused. Middle school counselor didn't reach out or go to any classes. Junior year teacher reached out to each student.
- Brooklyn: Always knew I wanted to be a nurse. Goal make A's no B's and honors classes. Mom helped with course selection. In high school talked to counselor every day. In senior year she met with each student and gave personal cell phone number.

Commissioner: Theme: It's been very clear that students get experiences thinking about careers very late. Think through some recommendations around that.

### **James King, TCAT**

- Announced Sandra Timberlake as the TCAT winner for outstanding student
- Will be an ambassador for the state

### **Group Share Out**

Questions

- 1) What do you consider as the strengths or most promising components of approaches, programs, learning models, accountabilities, and funding models that you have heard in the promotion of a “prepared,” “ready,” and/or “successful” student?
- 2) What are gaps or barrier that you believe exist or have heard exist that are (maybe) inhibiting students, educators, districts, state?

Group 1	Group 2
<ol style="list-style-type: none"> <li>1) How do we get students to have ownership over their career path and the career monitoring piece? How do we get parents into the conversation?</li> <li>2) How can we make sure the plans are reviewed earlier on and consistently?</li> <li>3) Accountability can help be a good lever to show where we are going and how to get there. How can we ensure items get included?</li> <li>4) Class size and teacher shortage as a concern, especially thinking about EPSOs.</li> <li>5) How can we replicate the TN Achieves mentor system in the K-12?</li> <li>6) Longitudinal view of a student, what information do we bring back to the community for what students are doing afterwards</li> </ol>	<ol style="list-style-type: none"> <li>1) Wanting to integrated experiences for students (CTE, EPSO) and not track into disparate experiences.</li> <li>2) How can we get students exposed earlier?</li> <li>3) Within schools there are opportunity gaps that need to be addressed.</li> <li>4) How can we measure or show soft skills? Should there be work keys or a portfolio piece? At the state level there could be a rubric for graduation distinctions for example getting a commissioner’s distinction for getting an industry certification.</li> <li>5) Accountability is a strong signal that districts listen to.</li> <li>6) Counselors- change ratio to closer to national standards or look at how to spread out other responsibilities.</li> <li>7) Potential the way to use technology.</li> </ol>
Group 3	Group 4
<ol style="list-style-type: none"> <li>1) Counseling- could there be guidance on how to preserve counselors time?</li> <li>2) Strength- strong commitment to accountability and the assessment task force.</li> <li>3) What would it look like for an outcomes based K-12 funding model?</li> <li>4) WorkKeys- strong credential that should be recognized.</li> <li>5) EPSO/CTE- how do we ensure quality across the programs?</li> </ol>	<ol style="list-style-type: none"> <li>1) Counseling- identifying barriers and gaps. Communicating to students and prioritizing the neglected areas. Pre-identifying students who need help and having the career conversations earlier. Recommendation: Having a counselor follow students through their career. Having a mentor system similar to TN Promise. Addressing BEP and lowering counselor ration</li> <li>2) EPSO- overcoming access and equity and teacher staffing. Postsecondary offerings may be a challenge. Recommendation: connect back to counselor.</li> <li>3) ACT- WorkKeys as a supplement. Does it belong in secondary and or postsecondary?</li> <li>4) Capstone- connecting to transitions, utilizing labor programs and ECD. Making labor programs connect to high school requirements.</li> </ol>

### **Closing from Commissioner McQueen**

- What is the thing that if we all align to it that will help students the most? How do we make sure students are owning their data? Know the pathways? Bring their families into the conversations? And what do you need to do to keep students on track?
- Could we do a better job on requirements on that? Districts need to own it.
- Cameron Middle School used to be the lowest performing school in the state. Tim Webb struck a deal to make it the first public to private charter. Brought in a university model (Lipscomb). Lipscomb decided to put attention into teachers, two faculty mentors for each teacher. Teachers were given plans based on data and individualized pathways. School went from a level 1 to a level 5 based on owning their own data. This was low hanging fruit. Students also want help understanding where they are, where they are going, and their pathway. This is the larger conversation with the auxiliary important pieces such as counseling, BEP, and career interest inventories.
- The BEP review committee with the State Board of Education has listed counselors as a point of discussion.

Thank you for your time and engagement.

To: Members of the Career Forward Task Force

From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education

Date: May 25, 2016

**Subject: Follow-up from meeting on May 25, 2016**

### **Meeting Overview**

The third meeting of the Career Forward Task Force was held on May 25, 2016, at the First Amendment Center in Nashville, Tennessee. The purpose of the meeting was to (1) learn about the research on leverage (or transition) points that could indicate a postsecondary-, career-ready student; (2) examine TDOE programs and assessments focused on preparing a ready student; (3) learn about ACT's National Career Readiness Certificate; (4) listen to student perspectives on preparedness for the transition to postsecondary; and (5) discuss salient points from the day and how those can drive task force recommendations.

The meeting began with opening remarks from Commissioner Candice McQueen. Commissioner McQueen reviewed the charge of the task force and its guiding questions before discussing high level takeaways from previous meetings. The task force has been discussing that "career ready" must be meaningful, rigorous, and relevant to students and their interests while aligning with employer needs and occupation opportunities. Additionally, it should include active employer engagement, utilization of multiple learning models, leveraging federal legislation and funding, and prioritizing processes and outcome elements affiliated with student preparedness and readiness measures.

### **Tracking Student Trajectories Over Time**

Jonathon Attridge, Research Analyst in the Office of Research and Strategy, presented department research on four major leverage (transition) points that can be utilized to help prepare students in becoming postsecondary- and career-ready. Tennessee has made major strides in improving the graduation rate, (which is currently higher than the national average); however, we lag behind the national average for ACT score, students reaching the ACT college-ready benchmarks, and students enrolling in postsecondary. Jonathon highlighted that the data discussed today were designed to be viewed with the lens of "how can we support students who are on track" and "how to catch up students who are behind."

The four major leverage (transition) points discussed in Jonathon's research included elementary reading, eighth grade math, ninth grade course success, and early postsecondary opportunities.

- **Elementary Reading:** The department has begun a priority focus on early literacy in the strategic plan [TNSucceeds](#), and with the recently launched [Read to be Ready](#) campaign. Currently, 43 percent of Tennessee students are not reaching reading proficiency by the end of third grade, and only 3 percent of students scoring below basic in third grade attain proficiency by the end of fifth grade.
- **Eighth Grade Math:** Students who take Algebra I in eighth grade are able to take higher levels of math in high school and typically outperform comparable peers on national assessments of college and career readiness, such as ACT's EXPLORE, PLAN, and ACT. The number of districts offering this option to eighth grade students has steadily declined over the past

several years. However, the department has rectified an accountability element that was disincentivizing districts from offering eighth grade Algebra I, and so it is expected that there will begin an uptick in offerings.

- Ninth Grade Course Success: A ninth grader's success in English Language Arts and Algebra I is highly predictive of high school success. Students who pass both courses are viewed as "on track" and are much less likely to be chronically absent, have discipline incidents, and much more likely to attend postsecondary institutions. Students who failed one or more of these courses during their ninth grade year, typically also underscored on their ACT, identifying them for remediation.
- Early Postsecondary Opportunities (EPSOs): The five most offered EPSOs are international baccalaureate (IB), local dual credit, statewide dual credit (SDC), advanced placement (AP), and dual enrollment (DE). While 80 percent of high schools offer some early postsecondary opportunity, only 40 percent of high school students graduate with EPSO credit. Not all students who exhibit or show preparedness are taking advantage of the courses, especially economically disadvantaged students, who are enrolling in the courses at lower rates, even when controlled for other factors such as prior academic achievement.

Jonathon concluded by stressing the importance of proactively keeping students on track and preemptively helping students who are falling behind their peers and providing personalized supports to help them catch up. Discussion also centered on the use of predictive analytics to drive better student identification and placement.

### **Student Assessments**

Nakia Towns, Assistant Commissioner of Data and Research, updated the task force on changes to Tennessee assessments. TNPromise has shifted Tennessee from being a K-12 to a K-14 free public education system and the department's assessments are aligned with postsecondary preparedness. The new Tennessee assessment (TNReady) has been created to provide better information on postsecondary readiness, full alignment to standards, and are Tennessee-specific. Tennessee Comprehensive Assessment Program (TCAP) has a variety of question types in the assessments to push students beyond multiple choice questions. In grades K-2, there will be a second grade assessment for English Language Arts (ELA) and math only. In grades 3-11, students are assessed on ELA, math, social studies, and science.

Nakia summarized the differences between the ACT<sup>1</sup> and TNReady. The ACT is a nationally recognized, cumulative assessment spanning topics from grades K-12, whereas TCAP and End-of-Course (EOC) assessments are Tennessee-specific and assess the depth of knowledge and understanding of a grade-level course. ACT reading and science sections do not contain content knowledge but are skills-based. Nakia also shared that the ACT has been added to the state's accountability.

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<sup>1</sup> Per state law §49-6-6001, effective July 1, 2007, districts are required to assess student readiness to enter and succeed in postsecondary of all students in grade 11. Students may choose either the Act or SAT. Because all districts currently contract with ACT, the following are ACT-focused resources and supports only. For more information about ACT/SAT, please visit the department's website at <http://tn.gov/education/topic/act-sat>

## Student Readiness

Casey Haugner Wrenn, Executive Director of Student Readiness and Early Postsecondary, presented on the major components and strategies tied to the department's student pathways approach.

**Student planning** is required by the Tennessee Code Annotated (T.C.A.) and Tennessee State Board of Education (TSBE), but what is listed on a student's plan does not necessarily align with that student's current needs. We believe earlier career interest inventories and active reviewing are important for students, but currently the legislation is confusing, not promoted, and there is no funding. **Capstones** are currently "encouraged" in TSBE policy. However, we believe all districts should offer capstone experiences that align with career opportunities. Because these capstone experiences are not required, there are gaps in student capstone course taking patterns and experiences.

There are eight types of [early postsecondary opportunities](#) that help students become familiar with postsecondary expectations and making informed decisions. We believe that all high schools should offer a diverse portfolio of opportunities so that all students who are ready to do so have the opportunity to earn EPSO credit/hours. Currently, there is limited funding and there is no requirement or incentive to offer a portfolio of options. **School counseling** roles and responsibilities are outlined in TCA and TSBE policies. School counselors work in the three domains of academic development, social and emotional development, and college and career readiness. The department is developing currently a robust portfolio of elements to support our belief that all schools should have an effective, comprehensive K-12 school counseling program. Casey shared the department is working on initiatives ranging from creating a school counseling advisory council to revising the Tennessee school counseling framework and standards. Counselors are currently experiencing the challenges of high student-to-counselor ratios, while being asked to do tasks outside of their role and with limited funding. Lastly, the department is working on crafting a definition of effective **student transitions** and a series of supports such as a kindergarten screener; however, the department also acknowledges that it must overcome a lack of non-cognitive data, no statewide definition of student readiness, and a lack of existing guidance for districts that can better in successfully transitioning student throughout their K-12 (13) experiences.

## WorkKeys

Debra Lyons, Senior Workforce Advancement for ACT, presented an overview of the National Career Readiness Certificate (NCRC) assessments of WorkKeys. The NCRC is a portable, industry-recognized credential that is currently used by 13,000 employers nationwide. The NCRC contains three assessments: applied math, locating information, and reading for information. According to the ACT JobPro database, a student who scores a gold on the assessment is ready to be trained for 93 percent of all jobs. Caterpillar and Eastman are two current employers in Tennessee who support work-ready communities.

Dr. Towns, Casey Haugner Wrenn, and Debra Lyons answered questions posed by the task force to conclude the presentations.

## Student Panel

Brooklyn Stephenson, Juanita Gomez, Catherine English, and America Leon participated in the student panel moderated by Commissioner McQueen. All four students are currently enrolled in





postsecondary and graduated from Tennessee high schools in 2015. Common themes from the panel included a lack of preparation for postsecondary in terms of “soft (transferable) skills” such as study skills, lack of awareness of opportunities, and the importance of having an adult to guide and support. The students gave sound advice such as not worrying about the label given to something, concentrate on the outcome, focus on listening to student voice, including the communities in change, and provide readiness elements in high school. America Leon inspired the group with her passionate words about the hope that this room has in shaping students and community outcomes.

### **Group Share Out**

Task force members participated in small group discussions to answer the questions: (1) What do you consider as the strengths or most promising components of approaches, programs, learning models, accountabilities, and funding models that you have heard in the promotion of a “prepared,” “ready,” and/or “successful” student? (2) What are gaps or barriers that you believe exist or have heard exist that are (maybe) inhibiting students, educators, districts, and/or the state?

Groups discussed the importance of supporting students in owning their own career paths, providing strong information on the integration of pathways, supporting school counselors, mentoring programs, utilizing the power of accountability to drive positive growth, and WorkKeys.

### **Closing**

Commissioner McQueen ended the day by sharing the story of Cameron Middle School turning around from being the lowest-performing school in the state. She shared that the knowledge of how to use the data and owning it were integral to the school's success. Commissioner McQueen suggested that the task force should prioritize helping students own their own information and folding in the additional recommendations around this central element.

### **Next Meeting Information**

The task force will meet again Thursday, June 30 at the First Amendment Center to continue its discussion on postsecondary and career readiness. For additional information on the May meeting, please see the attached meeting notes document.

Thank you for your participation in the May meeting of the Career Forward Task Force. Please feel free to contact [Melissa.Canney@tn.gov](mailto:Melissa.Canney@tn.gov) with any questions you may have.

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## Career Forward Task Force Meeting Notes

Meeting: Thursday, June 30

### **Welcome from Danielle Mezera Assistant Commissioner College, Career and Technical Education, Tennessee Department of Education**

- Today will begin the deep dive into the process of cultivating the definition of a ready student, the guiding principles of a ready student, and preparing recommendations.
- We will have three different perspectives of practice today: county, district, and workforce development.
- Review of the charge:
  - Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
  - Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary, and workforce readiness into K-14/16 education.
- Review of the guiding questions:
  - How do we know when a student is “career ready” at the secondary and postsecondary levels, and what should that look like at various milestones along the way?
  - How do we ensure that students are progressing along a directed learning pathway aligned with the state’s economic needs and employer needs at the secondary and postsecondary levels?
  - How should we capture and promote pertinent information in order to gauge the progression and vitality of the state in achieving an educated and skilled workforce aligned with diverse employer needs?
- We will have two more meetings after this. In July we will have a conversation about return on investment, data collection, and ESSA. In August we will continue work on the definition, recommendations, and guiding principles.

### **Profile of Practice from Rutherford County Chamber of Commerce by Beth Duffield, Vice President of Workforce Development**

- Community Snapshot of Rutherford County
  - #9 county for highest annual average wage
  - Strong job growth
  - 100% growth projected in the next 20 years
  - 2,700 new jobs created last year
  - Right behind Davidson county
  - 23% jobs in manufacturing but there are also significant headquarters such as Verizon, State Farm and working on growing white collar jobs

- Pathways to Prosperity Asset Mapping
  - Manufacturing, health care, finance and insurance, and professional scientific and technical services are the four fastest growing areas of industry
- Rutherford County School System
  - 93% graduation rate
  - ACT scores reflect career readiness in addition to college readiness
  - CTE concentrators in Rutherford county had a higher average ACT score than the state average
  - All students should be enrolled in CTE courses in order to provide career awareness to students
  - Motlow State Community College had the highest increase in enrollment in the state last year showing students are taking advantage of TNPromise
  - Rutherford County has a two year, four year, and TCAT postsecondary option. It will be getting an additional TCAT campus in a partnership with Nissan
- Approach to Workforce Development
  - Challenge is that industry's requirements are not always being met by the school system
  - Approach was pull industry and education together
  - Rutherford County Chamber of Commerce Vision: where passion meets opportunity
  - The Rutherford Chamber of Commerce views its role as the bridge between industry and the education systems
  - Health Care Council
    - Created a strategic plan. A goal was to increase the number of health care industry certifications held by Rutherford County residents
    - Working to expand the number of health care facilities that supports students in the CNA program and lab tech program (high school and postsecondary students)
- The How
  - Strong industry partners leading the charge is very important
  - Four key levers for implementation
    - Career Exploration
      - Career Pathways Partnership
      - Challenge is that programs now are just scratching the surface and that there are old stereotypes about CTE
      - Recommendations: career exploration should begin in the elementary school and be measured, require career exploration for all middle school students, and train school counselors on CTE pathways
    - Employer Engagement
      - Field trips for manufacturing day and trade day. Celebrate national health science day

- Challenge is burn out and fatigue of business partners, industry needs to spread the responsibilities among many business partners
  - Recommendation: build relationships, communicate the value of business/education partnership, and reduce duplication of effort/requests
- Work-Based Learning
  - Internship program- students work 16 hours a week. In 2016 there are 39 placements across 15 organizations. For 50% of students it was their first job. They expect more, achieve more mentality was shown to be true
  - Challenge is scale and scope, supporting the needs and interests of students, and changing the mindset that students who are under 18 are not employable
  - Recommendation: state level incentives for industry to work with students under 18, model Georgia's great promise partnership
- Pathways Development
  - Challenges to pathways are lack of awareness of CTE pathways and rigorous standards, limited availability of the right pathways, and sometimes difficult for postsecondary partners to think outside the box
  - Recommendations:
    - on the local level, move to evidence-based decision making process
    - at the state level, develop transfer pathways from high school to community college similar to the Tennessee Transfer Pathways from community colleges to four years
- Questions
  - Can a student transfer to a different high school based on interest?
    - No there is not open zoning but we are looking into how to support that for students
  - Could you speak about the disconnect between higher education and what employers want?
    - We have a Teach Ready conference to provide teachers understanding of STEM and access to industry partners. The teachers came back and shared how industry identified the need for soft skills. They are not embedded in the curriculum and have it be measured.
    - New freshman coming in don't know how to use a computer.
  - Where do the postsecondary institutions fit in with the partnerships with industry?
    - Postsecondary partners are at the table but not always willing to think outside the box or try something new. They understand that there are requirements that they have to follow. They are meeting with Motlow to share the strategic plan and the importance of a pathways.

## Profile of Practice from Bradley County Schools by Arlette Robinson, CTE Director

- Landscape of Bradley County, located in southeast Tennessee
  - Similar to Rutherford but smaller
  - There is a county and city government
  - Two high schools: Walker Valley and Bradley Central
  - Strong job growth and low unemployment rate
  - Postsecondary: Cleveland State and Lee University
  - Part of the Southeast Tennessee Pathways and LEAP grant
    - Building the pathway went out to business and industry partners to ask for specific parts of the grant initiatives
    - When they went out to the partners they realized there was a disconnect
  - Bradley County Vision: Growing Students-Building Futures.
  - Bradley County Outcomes: academic growth, confident leaders, competent workforce
- Advanced Manufacturing: Machining, Welding and Mechatronics- Anatomy of a Pathway
  - Wanted to have equipment at the local level but industry alone could not support its purchase. Went out to get a Youth Career Connect (YCC), Perkins, and LEAP grant to get the money to upgrade the equipment. There are now two mechatronics labs.
  - Identified Elements of Creating Career Pathways
    - Strong programs of study
    - Course integrations
    - Early college credits
    - Exposure to work-based activities
  - Wanted to get educators into industry and industry into education
    - All administration went to visit industry from elementary through high school
  - Piloted 5<sup>th</sup> graders to shadow with a CTE student in the high school. Encouraged the CTE student to educate 5<sup>th</sup> graders and started the industry awareness
  - STEM programs, interactive programming with middle school
  - All teachers went into an industry- *Faculty to Factory Day* and there are industry mentors
  - The chamber of commerce is supporting the work through career fairs and senior interviews. All seniors are given an interview with an industry specific person
  - Beyond the Diploma program- if any student gets credit in dual enrollment, industry certification, portfolio they are recognized
  - Internship experience video in Advance Manufacturing (Cormetech)
    - Students and industry partners talking about the benefits of internships
  - Goal is to have an activity each year for students in grades 5-12. Currently working on grades 6 and 7
  - Summer opportunities
    - Welding boot camp: All 14 participants sat for AWS certificate and all passed
    - STEAM camp: went to St. Louis to look at engineering. Students had to create a model of the vision and core values and present it to the company.

- A company has donated money to support work-based learning in advanced manufacturing
  - Partnership meetings are held quarterly with all the committees. With industry partner recruitment we have to create a common understanding between industry and schools, Go out and frame it as a partnership. Make sure to review and revise on a continual basis.
  - Challenges
    - Parent misconceptions
    - Parents believe college for all means it has to be a 4 year path
    - We have to support parents' understanding that there are multiple pathways to a career
    - People believe advanced manufacturing is "off limits" to students under 18. Cormetech has shown this is untrue.
  - Bradley County is actively working to undo the misconceptions.
  - They are working to develop partnerships for sustainability. You need to have someone who is actively reaching out to industry and be a champion.
  - Recommendations
    - Counselors need to be there to support students
    - Experience with WBL barriers
    - Support with funding
- Question
  - How involved are the business with content within the programs of study?
    - November we do an annual review of our program of study. Partners are given standards and pacing guides to review. Feedback on what standards need more or less time to align with business requirements.

**Profile of Practice from the Upper Cumberland Region by Lillian Hartgrove, Vice President of Workforce Development (The Highlands Economic Partnership)**

- The Highlands Economic Partnership is in the Upper Cumberland
- To be successful in economic development the region had to show that it had a workforce that would support the growth
- Upper Cumberland: 14 counties, population 345,381
- Notable companies in the communications, financial, distribution, transportation, manufacturing, and medical fields such as academy sports, Suntrust, Federal Express
- Partners in secondary education: Clay, Jackson, Overton, Putnam, Warren and White school districts
- Mission: preparing the citizens of the Upper Cumberland for colleges and careers
- Strategic goals- providing academic/career exploration for students, engage regional stakeholders in advancing Pathways TN and conduct an annual assessment of regional labor force data, establish parental and community engagement, partnership with state leadership and identify, and tap into funding streams for sustainability

- Academic/career coach positions were created to support students, starting with 7<sup>th</sup> grade
  - Strong partnerships with regional stakeholders
  - Jerre Boyd committed to working with industry and how to sustain it long-term, all the communities have
- Strategy
  - Rationale started by listening to regional stakeholders. Stakeholders were saying that they were missing the qualified workforce that they needed
  - Formed goals and objectives and subcommittees to address each of the goals and objectives and recommend solutions
  - Surveys of existing industry was helpful in making informed decisions
  - Gaps that could not be addressed locally were shared with Nick Hansen (Director, Pathways TN) to get state support
  - Prioritized academic and career connections
    - Annual career fairs, 7<sup>th</sup> grade career exploration models, interview boot camp for seniors to learn how to interview, build a resume, dress for success. Interview boot camp ends in a job fair
  - Alignment with seamless articulation agreements
- Approach
  - Driven by employer demand
  - Work on eliminating silos- one organization cannot affect the kind of change we need Academic coaches meet on a monthly basis
  - Steering committee composed of school, postsecondary, and industry partners
  - Measures: enrollment growth in POS and selected pathways, student industry certifications, dual enrollment, WBL, internships, job placement
  - Began in 2008 by forming the Highlands Workforce Development and Education, joined Pathways Tennessee in 2012
- Planned Growth
  - Starting information technology pathways
  - Starting teacher externship
  - Starting a summer bridge program for at risk students in 2017
  - Expand to other Upper Cumberland counties, engage more employers and increase work-based learning placements
- Success
  - Strong collaboration and partnerships, districts have a friendly competition, shift in programs of study (mechatronics), student engagement is growing, work-based learning is growing
- Stakeholder engagement
  - Started with simple requests such as career fairs and grew to bigger involvement such as funding
- Challenges and Opportunities
  - Articulation agreements

- Dual enrollment- money not always there to support all they are trying to accomplish
  - Demand versus capacity
- Sustainability
  - Takes leadership
  - Leveraging different funding sources
- Considerations for the task force
  - There is competition and it's not always healthy
  - Postsecondary territory issues
  - Capacity challenges in secondary education
  - Gaining parent and student support
  - Funding
  - Competing priorities
  - Must have collaboration
- Recommendations for the task force
  - Continue to expand pathways
  - Encourage regional collaborations and partnerships
  - Provide launch funding
  - Form highly committed action teams
  - Peer voices are very important for buy in
  - Postsecondary course alignment needs to be looked at
- It's about students, it's about their journey in life, it's about the economic stability of the region
- Questions
  - Academic career coaches, what is their qualification and who is their employer?
    - Employee of school district. Not necessarily an educator but wanted them to have industry background. In Putnam County, one coach has a healthcare background and one is has a business background. Neither is a teacher. They support elementary school students with career awareness and then for middle school to high school for exploration. Interact with the students and the community partners. They lead the interview boot camp. Academic coaches meet as a team to collaborate.
  - Middle school strategy, what was the challenge?
    - No answer was given to this question.
  - Data collection, how do we measure and collect the information in order to incentivize additional people?
    - Nick has been working on the data. Some data has to be collected at the local and some at the state level. At the local level, the coaches show the number of students they interact with and what they did. Students start with a Kuder career interest assessment to figure out alignment.



- Territorial issues in postsecondary and dual enrollment issues, can you give an example and what specifically do we need to overcome?
  - TCATs and 2 year are vying for the same students (under the TN Promise), so there is not incentive to collaborate. In Cookeville, the TCAT, 2-year, and 4-year are on the same campus, so there are challenges. Community colleges want to offer what TCATs already do and there is no need to repeat course offerings. We want postsecondary to offer the next level of courses, not the same course as in the high school.
    - Chelle Travis: TCAT and community college vice chancellors are working on a resolution. Additional measures have been put in place at the Board of Regents level for program approval and course improvement.
  - Dual enrollment challenge is with the funding perspective. Students want to take more than four courses, but don't have the funding (through the Dual Enrollment Grant)
    - Suggested solution (Rep. Brooks): In some cases, some courses could move over to dual credit as that is K-12 funding base.
- Silos, are there other examples we should address?
  - No it's the same examples K-12, postsecondary, and industry all being part of the conversation.

### Reflection from Dr. Mezera

Highlights to think about during the small group discussion:

- Middle school as very important years
- academic and career integration- students should have an “and” experience not an “either or experience”
- Work-based learning
- Coordinating of stakeholders
- Promoting the program of study
- Early postsecondary opportunities,
- Natural silos and how to break those down.

### **Small Group Work: Defining a Ready Student**

Small groups engaged in discussion around the question “As you consider what a ready student means in Tennessee, what key words come to mind?” Complete notes will be provided in a supplemental document.

### **Small Group Work: Guiding Principles and Recommendations**

Small groups engaged in discussion of the guiding principles to drive the work of defining a ready student. Participants reflected on their beliefs around integrated learning pathways, early postsecondary, career exposure, and postsecondary and career readiness. Complete notes will be provided in a supplemental document.

### **Closing**

Closing remarks from Dr. Danielle Mezera

- Powerful conversations occurred today.
- Between now and July we will compile the information. Each group member will get back the work they did to review. Group members are welcome to add additional information. The small group exercises will be compiled to create a one group document to pull out common themes. Group members will be sent all the groups and the common document to review and add. We will use those summary documents for the July meeting.
- Group members will be sent a draft report around the July meeting.
- Recommendations are setting a stance to provide guidance to any stakeholders who have a vested interest. It will be conveyed to important other stakeholders.



To: Members of the Career Forward Task Force

From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education

Date: June 30, 2016

**Subject: Follow-up from meeting on June, 30, 2016**

### **Meeting Overview**

The fourth meeting of the Career Forward Task Force was held on June 30, 2016, at the First Amendment Center in Nashville, Tennessee. The purpose of the meeting was to (1) learn about the profiles of practice from Rutherford County Chamber of Commerce, Bradley County Schools, and Highlands Initiative in the Upper Cumberland; (2) discuss which key terms should be used to describe a ready student; and (3) discuss the guiding principles of what it means to be a ready student.

The meeting began with opening remarks from Assistant Commissioner of College, Career and Technical Education, Danielle Mezera. Dr. Mezera reviewed charge and guiding questions of the task force. There will be two additional meetings of the task force that will cover return on investment, the Every Student Succeeds Act, and continue the work on defining a ready student and its guiding principles.

### **Profile of Practice from Rutherford County Chamber of Commerce**

Beth Duffield, Vice President of Workforce Development for Rutherford County Chamber of Commerce, provided an overview of the Rutherford Chamber's approach to workforce development. Ms. Duffield began with a snapshot of Rutherford County, which is a member of the Pathways Tennessee network, and has completed an asset mapping revealing that the four fastest-growing industries are: advanced manufacturing, health care, finance and insurance, and professional, scientific, and technical services.

Beth Duffield reviewed the rationale behind supporting workforce development and referenced that a major motivating factor is the disconnect between industry's workforce needs and students' knowledge and skills. Rutherford has centered all of their work on the vision "where passion meets opportunity." In order to support the vision, Rutherford County has leveraged four key elements: career exploration, employer engagement, work-based learning, and pathways development. In **career exploration** Rutherford has created the career pathways partnership, but is grappling with the challenges of students needing more time to engage with career exploration than is currently offered and the old stereotypes about CTE. Rutherford County has begun student field trips to industry to address **employer engagement**, but are facing the challenges of industry burn out without responsibility being shared. In **work-based learning** there is an internship program for students through the Chamber of Commerce but are facing the challenge of scale. The **pathways development** involves supporting the work of career pathways, but there are challenges with lack of awareness and availability. Beth Duffield concluded with recommendations to support each of the four levers.

### **Profile of Practice from Bradley County Schools**

Arlette Robinson, CTE Director in Bradley County Schools, spoke on the “what” and the “how” of building strong, community-wide student pathways. Ms. Robinson began with an overview of Bradley County and the vision of “growing students-building futures.” Ms. Robinson then walked the task force through the anatomy of the advanced manufacturing, machining, welding and mechatronics career pathway. The driving force for the formation of the pathway was the industry demand to have mechatronics equipment at the local level. Bradley County was awarded a Youth CareerConnect (YCC), Perkins Reserve Funding, and LEAP grant, and now has two mechatronics labs.

As part of the YCC grant proposal and cultivation of a pathway Bradley County identified four elements of creating a pathway: strong programs of study, course integration, early college credits, and exposure to work-based learning activities. Within those elements, Bradley County created initiatives at the elementary, middle, and high school level such as the *Faculty to Factory Day*, *Beyond the Diploma Program*, and fifth graders shadowing high school students enrolled in CTE courses. Bradley County has partnered with local industries for student internships and summer experiences. Arlette Robinson concluded by reviewing some challenges and offering the recommendations of prioritizing counselors for student support, working to overcome work-based learning barriers, and sustaining funding.

### **Profile of Practice from the Upper Cumberland Region**

Lillian Hartgrove, Vice President of Workforce Development for the Highlands Economic Partnership discussed the motivations behind forming an economic partnership and provided an overview of the Upper Cumberland Pathways Tennessee region. The mission for the region is to “prepare the citizens of the Upper Cumberland for college and career.”

Lillian Hartgrove discussed her strategic decisions to build partnerships between K-12 education, postsecondary education, and industry in order to support and grow the industry in the region. The strategy started by listening to the needs of the stakeholders and grew into a strategic steering committee that identified and brainstormed solutions to the challenges. The solutions included academic/career coaches in the schools, seamless articulation agreements, and career exploration activities embedded in the curriculum. Ms. Hartgrove outlined three challenges: articulation agreements, funding for dual enrollment, and student demand for programs versus capacity. She concluded with considerations and recommendations for the task force.

### **Small Group Work: Defining a Ready Student**

Small groups engaged in discussion around the question “As you consider what a ready student means in Tennessee, what key words come to mind?” Complete notes will be provided in a supplemental document.



### **Small Group Work: Guiding Principles and Recommendations**

Small groups engaged in discussion of the guiding principles to drive the work of defining a ready student. Participants reflected on their beliefs around integrated learning pathways, early postsecondary, career exposure, and postsecondary and career readiness. Complete notes will be provided in a supplemental document.

### **Closing**

Dr. Mezera concluded the task force meeting by providing an overview of the logistics leading up to the next meeting. Members will be sent their groups notes to review and provide feedback, and then will be sent a complete document of all group discussions to review.

### **Next Meeting Information**

We will meet again Wednesday, July 27 at the First Amendment Center to continue our discussion on postsecondary and career readiness. For additional information on the meeting please see the attached meeting notes document. We look forward to seeing your feedback on the small and whole group discussions before the next meeting.

Thank you for your participation in the June meeting of the Career Forward Task Force. Please feel free to contact [Melissa.Canney@tn.gov](mailto:Melissa.Canney@tn.gov) with any questions you may have.

### **Contact Information**

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## Career Forward Task Force Meeting Notes

Meeting: Wednesday, July 27

### Welcome Dr. McQueen, Commissioner Tennessee Department of Education

- Review of the charge:
  - Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
  - Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.
- We have an opportunity through ESSA as a state to begin elements of this charge.
- Review of the guiding questions:
  - Examine and explore ways to better engage students in their academic preparation, personal and social development, and workplace readiness.
  - Identify overarching principles leading to the development of actionable recommendations that reflect the strong integration of secondary, postsecondary and workforce readiness into K-14/16 education.
- As you think about your work and the students you interact with, how did you know when your work career ready? Often you didn't know, you went in and hoped to be career ready. The commissioner worked at the radio station and did the news and had an internship beforehand. The feedback she was given beforehand helped her to know if she was ready for the job. Although she had a sense of career readiness she wasn't on a pathway. How can we help students to know their own career readiness and be on a pathway to help them prepare.
- We will be hearing about ESSA and be discussing definitions and recommendations. The final task force meeting will include a complete draft.

### Every Student Succeeds Act (ESSA)

- ESSA was passed in December and is a new no child left behind. Tennessee Lamar Alexander had been leading the work on bringing those together. Now we have the opportunity to give feedback on ESSA.
- ESSA does not mean states can do whatever they want. There are a variety of programs that are mandated under federal law, but there are opportunities to take advantage of flexibility. ESSA requires stakeholder engagement to take part in making the plan.
- ESSA state plan goal is to develop a Tennessee-specific ESSA state plan, aligned with the department's strategic plan and informed by meaningful consultation with stakeholder groups.
- We are in the stakeholder input part of the ESSA plan. We are asking about the plan and to provide feedback and improvement. We hope to have a written plan this fall and then approve the plan in February/march.

- There are six working groups (accountability, standards and assessments, English learners, educator support and effectiveness, student support, and school improvement).
  - The working groups are a variety of stakeholder groups.
  - All feedback from other groups is given to working groups to digest and think about.
- Please use the feedback form to answer 13 questions.
- Questions about opportunities for input?
  - Website will be open through the first of September
  - Online we have received close to 200 comments
  - ACTION ITEM: We will send you the link, please send it to your constituents
  - We are meeting with all of the school boards in September
  - Industry membership is on working groups and Nashville Chamber. SCORE is collaborating with English learners and holding a meeting for industry members.
  - Are there other groups we should be meeting with? Please let us know if you do.
- ESSA is an opportunity for us to look at TN Succeeds and take it into plan form to fully meet the goals and expectations we have. It's an opportunity to be TN specific. We are not starting from scratch we already have a plan.
- Comparing ESSA requirements to TN
  - Accountability
    - We have a new accountability system. There are three pathways to show achievement and gap closure. Gap closure is a priority but we want all groups to improve. Economically disadvantaged and minority students gap is improving, but the opposite has been happening with ELLs and students with disabilities. We now acknowledge growth between proficiency levels.
    - ACT is now part of accountability. ACT is a high school graduation component now under state board policy. Directors of Schools lead this work.
    - If a district fails to meet 95 percent participation rate they become in need of improvement.
    - We are doing what ESSA requires. Measuring school quality and success is new. We have test scores in math and ELA, graduation rate, graduation rate, value added, and ACT. Now we have the opportunity to expand outside of test scores.
    - Tennessee has had a theory of action that is based on district. We now need to have a school accountability plan. We will be writing a school accountability model. This matches the legislature passing the A-F grading systems. There will need to be one summative score. We will need to have performance metric about school quality and student success.
  - School Quality and Student Success
    - District accountability metric and school metrics could be different, but feedback has shown we want them to be as close as possible. They may have to vary in size in terms of number of students.
    - Guiding principles on coming up with the indicator: align to our vision, promote college and career readiness, provide actionable feedback, reward

excellence, identify equity issues, provide additional pathways for districts to demonstrate success, minimize unintended consequences, comply with state and federal law.

- This is our opportunity to show what we as a state prioritize and believe.
  - All metrics must have data.
  - Possible metrics
    - **Chronic absenteeism**, discipline data, social and emotional learning surveys, EPSOs, or access to effective teachers.
    - **EPSO** limitations are availability challenges such as equitable opportunities, and are there certain programs that provide more opportunities.
    - We could limit the challenges by weighting the courses.
    - **Discipline data**- it fluctuates too much, also could be weighted. We could look at in school discipline gaps such as disproportionate representation in minorities.
    - Question: What is the department trying to incentivize? We want to say more students out of class is negative for students. We want to leave out dictating a schools discipline plan for schools. We want to make sure there is equity in suspensions.
    - 24 percent of students in the state are minorities but 80 percent of suspensions
    - Study from UPenn found that Tennessee expelled more African American students than any other state.
    - Question: Why is that?
      - The report does not answer it. That is up to districts to look at.
    - These metrics could be in accountability or they could be transparency metrics.
    - ACTION ITEM: We can share the data on discipline.
    - Our goal is to make sure we are highlighting things that are important to us.
    - **Access to effective teachers** is another possible metric to look at.
    - Question: Would this look at teachers outside of their license area?
      - We are looking at that but this is slightly separate.
    - Effectiveness based on value added. Observation scores tend to be inflated and there is not a lot of spread.
  - We are hoping to integrate an index of opportunity to create a more holistic measure.
  - As we are talking let's make sure we are thinking about unintended consequences as we don't want that. The opportunity index is something that all the feedback groups have given positive feedback on.
- Small Group Discussions



- What is being presented is a set of outcomes, what I don't see is the process? What are the processes that are involved in advantageous outcomes? That may not be easy to quantify, but is something to think about.
  - Inherently in an accountability model your metrics are outcomes but they all connect back to for what you should be doing to lead to improvement. We know students who are chronically absent in kindergarten are not on a pathway to read proficiently and graduate. We need to think about conversations with the communities. This is why some people have asked for transparency measures for a few years to talk about how to improve it.
  - This is a great start. Performance of different subgroups in the measures should be considered. Access to effective teachers, what do we do about teachers who do not have value added? Have you considered college going rates for postsecondary? It is lagging data.
    - College going rates is not enough we care about persistence and is so lagged it goes against actionable data.
    - Value added is a limitation as it is limited to certain content areas and teachers.
    - Subgroups- ESSA requires the disaggregation by subgroup. Any metric would have to be disaggregated for reporting but we are deciding if it would be in accountability.
  - Should we be looking at remediation?
  - Accountability versus transparency is important. Good idea to have a runway with transparency first. These metrics make sense. Teacher effectiveness and teacher quality but we haven't said anything about leader effectiveness and leader quality. Leaders are the levers.
    - Climate survey does get at leadership. There are surveys that have been validated that would include the leadership component. There is pushback on surveys. But it does tell you something where there is an absence of data. Pros leadership component is inherent and you can dig in and get data on discrete components. Cons folks believe you can game a survey.
    - The whole point is to create data that is useable.
    - Some districts already use surveys.
    - Survey participation is sometimes a challenge. We also agree that there are measures of leadership quality.
    - Can we talk about program effectiveness, for example CTE concentrators? Can we audit high school transcripts to ensue students are taking the courses someone says they are taking. We are doing a study right now, and there is some discrepancy across the state.
      - Course enrollment information hard to generalize from especially as some of the challenge is reporting. We could

decide that CTE concentrators is an area we want to focus on. As an issue we are taking it up, but not necessarily something in accountability.

- Lagged data is a challenge but doesn't mean it should be moved off the table. For example college perseverance doesn't have to be in accountability but could be a five year model to depict how schools are growing. Good to think about with transparency metrics. Right now we have the opportunities under TNPromise and Drive to 55, and K-12 is the most important place to set the state up for success. College access is important and now we are going to monitor it and match our accountability model to it.
  - ACT requirement in reference to graduation. It passed first reading at the board. Now you can't argue not taking the ACT. It was already in law and now is in policy. It can be ACT or SAT.
  - College going is the result of a successful high school graduation and then the burden falls onto the postsecondary. TBR is going to remediation model and retention has increased fivefold. The college and university needs to take some responsibility. We also need to think about placement as a metric. Some students have certifications when they graduate so where they place in community college matters, we also have the labor data. Placement you would want to match with a pathways.
    - Placement is too broad as some placement is in fast food. We also want to see a meaningful next step. Data suggests that remediation coursework does not help all demographic groups evenly. We need to provide ancillary supports. We would have to look at different measures such as first generation students and loan rates. Co-requisite is helping but we don't necessarily have that model in four year institutions.
    - K-12 now has SAILS which is making a difference. Tracking students is going to be very important.
  - Explore is used with world of work. Have there been suggestions about using a career interest inventories?
    - We should be thinking about our recommendations from this task force. ESSA provides integration with academic and technical skills. We want to be thinking about what is the whole story, students need to be aware of why.
  - This conversation is not ending here, we want to bring this back to you with some research.
- Career Forward Key Takeaways

- **March:** Where is Tennessee? Where are things happening nationally that we should be looking at?
  - We looked at the mismatch in readiness, and what does that mean for the end product, our student.
  - By 2020 we are not projected to reach the national average of job to postsecondary attainment. We need to hit 55 percent and move past.
  - Getting a job does not necessarily mean a living wage.
  - Bob Schultz spoke about the key levers to student pathways. Be thinking about these levers in small group.
  - Maura from IBM and the P-Tech model. Early college as a more directed approach.
- **April:** We began to think through some takeaway questions: (1) predictors, (2) outcomes, (3) early college, (4) school counselors, (5) authentic experiences.
  - We began to look at Drive to 55 data and the disruption index. The disruption index will occur due to technology. We need to think through how we are preparing our current and future employees.
  - Started a conversation on work-based learning and the importance of quality.
  - Steve Voytek to talk about ESSA, WIOA, and Perkins and provide a landscape. There is a running theme in the acts and it is important to think through an integrated model.
    - Well-rounded education is a term that is new within ESSA, it's important to think about the whole student. All the acts are coming together to say it is not enough to just have high school diploma.
- **May:** Takeaways from previous sessions.
  - Jonathon Attridge talking about the lifecycle of a student. There are certain moments of time where you can look to see how students are progressing. The majority of Tennessee students are not reaching the third grade proficiency. All these leverage points should be viewed as opportunities. Eighth grade math determines a student's trajectory of math courses and EPSO hours. Ninth grade course success is highly predictive of high school and postsecondary attainment. Too few students who are ready take EPSOs. We should be thinking about how to place value on postsecondary in secondary. Are there other points we should be thinking about?
  - We looked at the current TN assessment landscape and the effective K-14/16 student pathway. We at the department believe students should have seamless learning. We need to be thinking about the planning, how do you help students be more informed consumers?
- **June:** Stakeholders spoke about their initiatives. Beth Duffield, Rutherford Chamber of Commerce spoke on the challenges to career exploration and recommendations. Challenges include just scratching the surface and stereotypes about CTE. Recommendations include career exploration in elementary school. Beth also talked

about work-based learning and the importance of incentivizing industry in work-based learning.

- Arlette from Bradley County shared successes and the opportunities. Opportunities include changing perceptions for parents and moving away from four year college for all. Arlette talked about the importance of counseling and advising.
- Lillian Hartgrove from the highlights initiative spoke about their work on regional growth. She spoke about articulation agreements, dual enrollment funding challenges, funding for equipment, ability of staffing to capacity, removing the territorial issues in postsecondary, and gaining parent and student support,.
- This recap was to help with small group thinking.
- In terms of EPSOs there are barriers in terms of access and participation. One of the things we have to address is soft skills and some of the students who already have that are athletes. We are doing students a disservice by having 4<sup>th</sup> block sports when students could be taking EPSOs.

### **Toward a Data Strategy for College and Career Readiness by Jason Parker, IES Grant Coordinator TDOE**

- “Data are good, we need more, let’s share”
- In terms of our data strategy we need to make sure we are thinking about the directed learning pathways and how we are connecting students’ interests and aspirations with concrete education/ career opportunities.
- Data strategy for CCR needs to show us if the education system is providing coherent systems.
- Vocab lesson: Data are raw observations or measures of an object, phenomenon, or event.
  - Information is derived from a collection of data points and helps us understand some aspect of the measured object, phenomenon, or event.
  - Insight leads us to action.
  - The gold standard is student level observation.
- Our TDOE data is based more on academic data compared to social/emotional and college and career readiness. We need to think more about the granular view to get at root causes. We have lots of opportunities to learn more, for example tardiness or positive skills and traits in our students.
  - Discipline we mostly see as “violation of school rules” which is a huge spectrum of events. Getting a view of those elements would help with understanding readiness. These are minor violations.
  - Do we track who has participated in career exploration? Not really, maybe locally.
- Opportunity: Secondary Education Plan
  - Students are required to have a secondary education plan by the end of 8<sup>th</sup> grade and is intended to be a key advisement tool. Each student’s plan could become an individualized measure for success. At the state we do not receive any of this data.

- We should be thinking more about inter agency data sharing.
- College for TN. Org is a way students can gain knowledge and connects to drive to 55.
- Tennessee P20 datasystem (grades preK-20 grade school)
  - Longitudinal data
  - Longterm with a lag
  - Smyrna high school postsecondary enrollment data, thinking about how to share this data with schools. Smyrna only has 6 students going to TCAT- area of growth. 204 did not enroll.
    - Only 2 percent of students go right out of high school to TCAT, huge area for growth.
    - 56 percent of cohort went to postsecondary and matches statewide data. Doesn't leave much wiggle room for drive to 55.
    - Military does count in did not enroll, something we are working on.
- Opportunities for improved data flow
  - There is a six month delay between end of semester and availability of the data in P20
  - We are working on how to communicate with other agencies data.
  - There are opportunities to improve the data flow, if we are talking about students we need to make sure the data is right.
  - Inter-agency data sharing is crucial
- Questions
  - How difficult would it be to get a picture of initial enrollment? We could, it lies with the higher education commission. THEC gets a six week enrollment data, but it's not pushed to P20 as so many students don't finish the semester.
  - Exciting we are talking about the longitudinal data system as a lot of people want the information.
  - We have enough data in place to analyze it and share with districts.
  - Is student not enrolled given to work force development boards? Currently no, but that is a great idea.
  - This is powerful data for communities, as people just don't know. Student saying their plans is vastly different than reality.
  - Tennessee Promise students are persisting at a higher rate than their counterparts who are not TNPromise. We are wondering why. Students may say I am going to college but TN Promise students are already there, they are being coached. There is a huge power to mentorship. Should every high school teacher have a mentor? TNPromise is helping to shape cultures and expectations within schools.
  - Some of this also has to do with the culture. We also need to be thinking about the culture. There are challenges with matching and marrying of data.
  - 204 that did not enroll, at TCATs average age is 26/27 and a huge number of them are coming back from having not done anything out of high school. Reconnect is important.
    - We could see this data in 10 years.

- Educators don't always know about all the opportunities especially TCATs.

### **Small Group Discussions**

Reflection on:

- First draft of ready student
- Guiding Principles
- Reflections

### **Closing by Commissioner McQueen**

Between now and the next meeting you will get drafts on the principals and recommendations. Our goal is to create something actionable that we can then act on immediately.

Senator Norris update on funding. In the budget for the current fiscal year LEAP 2.0. 10 million funding for LEAP including funds for longevity for existing programs, expand reach, and fund employers to compensate students to go into work training. People can now be learning a skill and a wage at the same time. LEAP proposals are due at the end of the week. There is another pool of funds for "capacity" fund programs at TCATs and community colleges expansion and updating.

We look forward to work together to think about the funding that will come out of this task force.

Thank you for your time, it has been an exceptional day!



To: Members of the Career Forward Taskforce  
From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education  
Date: August 9, 2016  
**Subject: Follow-up from meeting on July 27, 2016**

### **Meeting Overview**

The fifth meeting of the Career Forward Task Force was held on July 27, 2016, at the First Amendment Center in Nashville, Tennessee. The primary purposes of the meeting were to (1) share how the department's TN Succeeds Vision fits within the federal Every Student Succeeds Act (ESSA) framework; (2) review salient topics from previous sessions; (3) learn about the available data on student readiness; (4) discuss the draft Ready Student definition; and (5) devise guiding principles and recommendations for the Career Forward Taskforce Report.

Dr. Candice McQueen, commissioner of education, began the meeting by reviewing the taskforce's charge and guiding questions. The sixth and final meeting will include a complete draft of the Career Forward Taskforce Report.

### **TN Succeeds Vision and ESSA Opportunities**

Dr. McQueen provided an overview of ESSA and how the department plans to integrate the act's provisions into the TN Succeeds strategic vision. The federal legislation succeeding No Child Left Behind, ESSA offers states greater flexibility in developing state-specific plans than its predecessor, provided certain federal mandates are met. Dr. McQueen stated that the department is consulting with stakeholder groups to develop a Tennessee-specific ESSA plan that aligns with the *TNSucceeds* vision. To this end, the commissioner requested that taskforce members and their [constituents offer input](#) to better inform the department's ESSA workgroups. The feedback form will accept responses through Thursday, September 1.

Focusing on accountability, Dr. McQueen discussed where Tennessee stands in comparison to ESSA requirements. Tennessee's new accountability system measuring district-level achievement and gap closure in test scores, graduation rates, and ACT scores already meets much of ESSA's provisions. However, ESSA requires the department to also develop a school-level accountability plan. The department will use this opportunity to devise a single, summative school quality and success metric that looks beyond traditional test score achievement.

Dr. McQueen stated that developing this school quality and success metric will serve as Tennessee's opportunity to demonstrate what the state prioritizes and believes in within education. The department has identified a number of guiding principles to shape the process, namely that the district and school-level quality and success metric should align to the TN Succeeds vision, promote college and career readiness, provide actionable feedback, reward excellence, identify equity issues, provide additional pathways to demonstrate success, minimize unintended consequences, and comply with state and federal law. Possible components to include this metric include chronic absenteeism, early postsecondary opportunities, school discipline, and access to effective teachers. Taskforce members discussed these indicators and suggested additional measurements, such as



school leadership, college persistence, and career placement. Jason Parker, IES grant coordinator for the department of education, offered to report back on these suggestions, noting that even if data or methodology limitations prevent inclusion in the quality and success metric, the department can publish separate indicators as part of its larger transparency report.

### **Review of Previous Sessions**

Dr. Danielle Mezera, assistant commissioner of education, reviewed the taskforce's activities thus far to prepare members for the small group session. Complete notes are available in memoranda from previous taskforce meetings.

### **Towards a College and Career Readiness Data Strategy**

Jason Parker, IES grant coordinator, provided an overview of the department's ongoing college and career readiness data strategy. Mr. Parker described how the strategy aims to gauge readiness from a holistic perspective, but noted that extracting meaningful and actionable insights require data to be more available and more refined. Within discipline data, for example, "violation of school rules" encompasses a broad range of minor violations that could reveal behavioral issues impacting readiness. However, Mr. Parker did note a number of opportunities for the state to better collect and collaborate on existing information. For example, a system gathering the secondary education plans that eighth graders complete could allow the state to develop an individualized measure for postsecondary success. Similarly, the Tennessee P-20 data system offers longitudinal postsecondary enrollment data that could better inform schools and districts on successful or underutilized pipelines.

### **Small Group Work: Defining a Ready Student**

Small groups discussed initial and revised draft definitions for the Ready Student. Complete notes will be provided in a supplemental document.

### **Small Group Work: Guiding Principles and Recommendations**

In small group, the taskforce put their guiding principles and recommendations for student readiness to writing. Participants reflected on their beliefs around integrated learning pathways, early postsecondary, career exposure, and postsecondary and career readiness. Complete notes will be provided in a supplemental document.

### **Closing**

Dr. McQueen concluded the session with logistics and a preview of the final meeting. To ensure efficient discussion, members will receive a draft of the taskforce's guiding principles and recommendations before the next meeting.

### **Next Meeting Information**

We will meet again Thursday, August 24 at the First Amendment Center to review the draft report





and continue our discussion on postsecondary and career readiness. We look forward to your feedback.

Thank you for your participation in the July meeting of the Career Forward Task Force. Please feel free to contact [Melissa.Canney@tn.gov](mailto:Melissa.Canney@tn.gov) with any questions you may have.

### **Contact Information**

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## Career Forward Taskforce Notes

Meeting: August 24, 2016

### Welcome from Dr. Candice McQueen, Commissioner of Education

- We have all elements of the guiding principles in draft form today for the task force to review.
- Today we should be thinking about where things resonate and where we place priority on the recommendations, letting the guiding questions frame our work.
- Our panel today will feature conversations with some major stakeholders who will be involved in the work going forward.

### Overview of Guiding Principles and Recommendations by Dr. Danielle Mezera

- **Ready Student Definition:** We want this to serve a guiding source of what our state should strive for. The definition as written extends beyond K-12, recognizing the value of postsecondary attainment and the importance of employability/soft skills.
- **Guiding Principles:** Nine areas of focus in the guiding principles: integrated learning pathways, employability (soft) skills attainment, early postsecondary, career exposure, seamless secondary-postsecondary transition, postsecondary credential attainment, counseling/advising, postsecondary and career readiness measures, and graduation requirements.
- **Recommendations:** See attached handout for review.
  - Questions/comments:
    - “General assembly” language should be changed to say “General Assembly and the Governor.”
    - (#27 – funding for counseling) BEP review committee has prioritized this, along with reconsidering technology expenditures.
    - (#8 – career planning inventory) Is the 10<sup>th</sup> grade too late?
      - The grades are suggestions as we know most students start programs of study in their junior year, but the goal of the recommendation is to prioritize those active conversations between students and advisors to craft their plans.
    - (#11- capstone requirement) Would these requirements be waived?
      - We want to move students to the point where they are all meeting the requirements, but there is a concern on requiring it for graduation. Adding a research pathway as a capstone option could help.
    - (#14—early postsecondary requirement) Add a note indicating which courses this includes.
    - (#26 – counselor training) This would be a conversation the counselor would have with their principal or district leader.

- There may be some recommendations that need more analysis before we put in place before making an official recommendation.

### Small Group Discussions

- Groups discussed the draft definition, guiding principles, and recommendations before reconvening as a large group.

### Large Group Reflection on Guiding Principles and Recommendations

- Planning piece is very important and the counseling.
  - Strong articulation of what counselors.
  - Topic to bring clarity and alignment
  - Small groups on defining counseling and its role.
- (#4- early college models) Pellissippi State is doing great things with their early college model.
  - Half a dozen schools within the Board of Regents' purview already have middle colleges, but there are some significant barriers. Needs to be a recommendation for further analysis.
  - We already took away the negative incentive to graduating early.
- DC/ DE enrollment needs to have more continuity across the state.
- ESSA explicitly parts and accountability, could we foreground some of the requirements that will already happen with ESSA.
- We will send a final draft in the next few weeks and the final by September.

### Going Forward: A Ready Student Panel Discussion

Dr. Candice McQueen, commissioner, Tennessee Department of Education

Burns Phillips, commissioner, Tennessee Department of Labor and Workforce Development

Dr. David Gregory, interim chancellor, Tennessee Board of Regents

Mike Krause, executive director, Tennessee Higher Education Commission

Ted Townsend, chief operating officer, Tennessee Department of Economic and Community Development

Dr. Danielle Mezera, assistant commissioner of college, career, and technical education, Tennessee Department of Education (Facilitator)

- *Educational choices and career choices are not mutually exclusive, but often treated as such. Why do you believe that has been the case?*
  - **Phillips:** Lack of awareness between education and business. Lack of awareness of the overlap in skills. Lack of awareness in what is needed in education, although that is changing every day.
  - **Krause:** We are evolving and reconsidering the purpose of higher education. Higher Ed has been reacting to business needs overall, and Tennessee is moving more quickly compared to other states.

- **Gregory:** Part of that is the discussion is straddling the theoretical and the applied. For instance, in our own community college system we used to have six institutes that have since transitioned into community colleges.
  - **McQueen:** In K-12 we have historically not done a good job of saying why you are learning the content and how it is connected to something larger. For instance, is teaching a liberal arts-based or professional skill-based career? It's not an either/or matter it's both. Even in the STEM fields you need to be talking to younger students about the type of careers that what they are learning can lead to.
  - **Townsend:** This disconnect has been fundamental and traditional. Careers are seen as a long distance destination. It's hard for students to see that what they are doing is preparing them for life. We want pathways to be declarative and easy to understand. Engaging industry and articulating agreements are very important. We have a responsibility to continue this effort to make sure industry is engaged and that Tennessee is a destination of choice that also provides opportunities for its own. We are setting higher standards and demanding more performance. That disconnect is going away, and we will soon have engagement and involvement as the connective tissue going forward.
  - **Burns:** Everyone points the finger at education, but we have started a new initiative on consultative work force development. We work with employers to assess the health of their work force. A lot of businesses do not have a handle on their own work force as they are demanding things that they don't really need. Business also need to understand what they are really lacking. It's not always education, either; sometimes business misses the mark as well.
  - **Mezera:** Disruption is a good term to think about going forward. How can we disrupt the silos that separate career and education pathways?
- *How can business be involved to ensure K-12 graduates are prepared for the workforce?*
    - **Gregory:** This is the greatest challenge to make sure we are talking to each other. The skills panel in Middle Tennessee has heightened that notion. Education and business and industry need to talk to each other in a common language about what they need. We need to have the right kind of people at the table. We need business at the table who will be writing the positions and on the education who are writing curriculum. Meeting people at the right level is important. Sustainability is key. Sustainability discussion around education and workforce needs is important. We just finished another skills panel in Nashville, and are trying to figure out how to institutionalize it so that people don't look at this as a temporary opportunity.
    - **Townsend:** Supply and demand. With respect to ECD, since 2011 we've announced over 123,000 net new jobs to Tennessee's economy backed by \$23 million in capital investment. That has put pressure on this system. It's risk capital, especially in the human capital element. After all, over one million workers will be effected by automation. Yet we still see that industry has a high appreciation for Tennessee's workforce and the state's investment in it. Announcing the jobs is great, but we need

the skilled Tennesseans to fill them. Unemployment is decreasing, but it is not distributed equally across the state. We have to meet what industry is asking for and they need to clearly state their needs. When people are employed they are providing for their families. If we meet the drive to 55 we are producing vast increases in the numbers of employed Tennesseans, and the additional income received would mean \$746 million more in state revenues.

- **McQueen:** How do we create a variety of pathways for students to be successful? Previously we have sent a uniform message to the detriment of students. We need to use data to drive those decisions. It takes the local communities understanding the need. We need to know what is coming and be responsive to that 5-10 years out. That is complex and challenging but not undoable. We can do it with better conversations and better data. We have to be intentional.
  - **Phillips:** I agree, sustainable and intentional. Business has successfully reached out to education in some areas. In Jackson, 23 businesses came together to counteract Toyota hiring away advanced manufacturing technicians. The businesses wrote a curriculum for Jackson state and provided tools, and are now extending the program into about a dozen high schools. Other companies should consider this model of banding together to become self-sustaining.
  - **Mezera:** The shared language piece is essential and is a common theme we hear. Sustainability is also important; there is a belief that “this too shall pass” so countering that will be an ongoing issue. We need to break down barriers and seize opportunities. On a visit with Hamilton County an employer said they wanted a greater touch point with school, but the school wanted them to supply uniforms for the soccer team rather than discuss curriculum.
- *We have a lot of recommendations promoting seamless secondary-to-postsecondary transitions. With this belief that the two systems must work together, how can we support that?*
    - **Krause:** It's great that we aren't building from nothing. PC967 is helping. SDC is still mostly high achieving students. Only 4 percent taking full four course but with change in legislation more students are taking but to just one course. Building in default DE pathway is a good step to ensuring students are taking it. A lot of students who do take it are the go getters.
    - **Gregory:** In higher education we measure everything. We don't measure DE as well as we should. For first time college students there is still a fear of college and getting the confidence in high school is huge. Mentorship is very important in the TN Promise program. The idea that we are all here together and talking is important, we need to stay linked. We have to sustain those discussions and show the alignment is an easy seamless approach for our students.
    - **McQueen:** We have to hold to high expectations in K-12, we have to keep talking about our standards and keeping to our standards. We have a lot of room to grow in expectations and standards but we are not seeing the growth. ACT results came out today 1300 more eligible for HOPE. 21 average nationally to a 20.8. More TN

students took it than ever before and held firm with 19.4. In the subtest scores on average only around 20 percent of our kids are showing that they are postsecondary ready. We have high aspiration, TN promise, drive to 55 but we still have kids who are not ready to seamlessly translations. Setting high expectations and the hard work at the local level is extraordinarily important. We cannot become weary of this conversations. WE need to ensure strong professional learning, teacher prep programs. In October TNReady scores are going to be low, people will say it's too hard but that's not a reason to back to. Growth will happen and we will start closing that gap. We will have more students ready. Students have to read deeply, have to have technology skills.

- *Statewide work achieves so much but, where it matters most is at the local and regional levels. How do you get past any disconnects and see this work through to local communities and regions? What would you like to see going forward?*
  - **Townsend:** We often bridge that gap in state and local level. The transactions cannot be decoupled from the local level so it requires local involvement. For example, we've built in incentives to the three-star county program. Those seeking that designation are required to include an activity plan focused on education and workforce development. Companies like seeing this as they want to know they are getting involved in an engaged community. They want the people who they relocate to Tennessee to have the right educational opportunities for their families. When we have mayors and alderman engaged, that makes a huge difference. If a mayor can talk about graduation rate with pride, that can be the tipping point.
  - **McQueen:** Leadership matters. Superintendents saying "I know that this is what my students need to be successful" impacts what happens throughout the district. Leadership matters at all levels.
  - **Gregory:** TCAT's have had business and industry councils for decade. They meet consistently. They are connected to the local business and industry. In Putnam County for example, we asked the Chamber of Commerce whether we were meeting their needs. Commerce said we were, they had read our report. Two things we consistently hear back as challenges are drug abuse and soft skill attainment. These challenges cut across all areas of the state.
  - **Krause:** We look for local cooperation and leadership when we need to ask them to do something. For example, Senator Norris the father of the LEAP program. It makes people do something to drive action. Come up with a project and do it.
  - **Phillips:** The Jackson initiative I mentioned prior is an example of something working well at the local level.
  - **Mezera:** The issue building a culture of expectation by setting the structures to produce active communications. Expectation of coming to the table with something is important. If a business wants someone to come with the soft skills they need to be part of the discussion of the development of the soft skills by participating in work-based learning. Be a two way street.

- *Looking forward, how do you envision your agency's work in developing ready workforce?*
  - **Phillips:** We are responsible for WIOA. We are trying to engage in being a facilitators for businesses to figure out what they need and develop a plan to be self- sustaining. Technology changes are playing a major factor as they require agility and a culture of lifetime learning. Technology may remove some jobs, but it also produces jobs. We want to drive that pipeline down to students. After all, things are going to change rapidly.
  - **Krause:** THEC's core vision is to focus on the number of Tennesseans with a college degree. Collaboration with K-12 is key to that work, particularly in getting involved in teacher preparation. For Advise TN, the role is to help students go to college. Our job is to make sure we are all rowing in the same direction. Our job is to make sure we will make the drive to 55, we can't afford not to.
  - **Gregory:** 43,202 is the number of degrees we will be producing in 2025. To get there, TBR has to reach a segment of students that have not historically thought higher education is in their future. The more linkages we can have, the better.
  - **McQueen:** We have to reach drive to 55 and reach the three goals in TN succeeds: ranking in the top half of states on NAEP by 2019, attaining a statewide average ACT composite of 21 by 2020, and seeing the majority of graduates from the class of 2020 earn a postsecondary certificate, diploma, or degree. K-12 is not the end goal, it's the beginning of setting you up for success in the next level. We should also consider how we think about character as well, and how do we support our communities.
  - **Townsend:** We will remain passionate about developing diverse and distinct communities that are successful. We see this whole task force as an opportunity to continue to develop the backbone of our strategy driving our work.

### **Large Group Debrief by Dr. Danielle Mezera**

Thinking on the salient points of the past six months, where do you find yourself? Where are you willing to put your stakes in the ground?

- **Dr. Mezera:** This is the work we live and breathe on a daily basis. At our division retreat we did an overview of where we have been. This has been a long journey but we are progressing around base camps to our Everest. We believe in all recommendations as we believe in a holistic view of education. This fits into our priority on why, why does this have relevance for your students and stakeholders. This has given us time to reflect on the why.
- **Debbie Landers:** In my role on the advisory council, we can speak clearer on the heart and goals. We can ask member schools to align to the heart of the matter and reach out on a local level to chambers of commerce.
- **Stacy Kizer:** As a classroom teacher, taking ownership over employability and soft skills attainment. As teachers we like to point the responsibility to someone else, and now I'm reminding myself that I can have a role and share that leadership and role with other teachers in CTE and core subjects. Williamson County has a good relationship with chamber

of commerce, but the meetings are often “warm fuzzy” meetings that don’t yield outcomes. I can go back there and lead a conversation around projects to work on together.

- **Tony Cates:** For too long it seemed like we had given up on kids on saying they weren’t going to college. TN Promise is changing the narrative and the conversations with kids now.
- **Kristina McClure:** In Hamilton we are working to change curriculum to meet new needs, teachers are referencing statistics to prepare students for the workforce. We are trying to find businesses to partner with that will get students excited. As a counselor for first-generation college bound students, I am taking back the information on the variety of different pathways to the students I am mentoring.
- **James King:** TN Promise has been wonderful. At TCATs we struggled to get 18 year olds enrolled. Faculty was nervous about the influx, but 95 percent of kids who started are still enrolled. Enrollment has doubled for this fall with TN Promise. We can commit to continue access to dual enrollment. If we need to take more programs into high schools we will do that. We need to overcome the barriers for students.
- **Susan Farris:** In our county we are no longer talking about college bound or technical bound kids, but owning all of them. I will take this conversation to teachers and advisory council so we can identify the areas where we don’t know enough. We need to find options for all students regardless of their academic achievement.
- **Jeff Frazier:** Help equip our counselors to be successful with workshops and networks, and lead a high school transitions council. Dual enrollment options need get better on the CTE side and drive a regional approach. Can’t avoid our vocation in education, use the church as a resource.
- **Kyle Southern:** Student panel has continued to resonate with me. This is equity work, economic empowerment and enabling choice. SCORE can view this work as an equity work. Use our convening work, policy, research to help bring these recommendations from paper to action but to keep student voice at the center.
- **Nathan James:** SBE has been working to remove old and antiquated language. Work with all the groups he participates on to align and work in the same direction. The separation between K-12 and postsecondary is unacceptable; we need to tear down every barrier.
- **Vicki Kirk:** Need more that 20 percent of students achieving on ACT. I commit my work on the TN state standards offering high expectations and aligning strong instruction.
- **Jade Grieve:** It’s a complex issue and we’ve been debating so much imagine what teachers and students feel. We need to think through how to translate this into change on the ground. Committing to evidence based and sharing research. P-20 data system has huge potential.
- **Tristan Denley:** Happy to see role of TBR in recommendations. Reaffirm commitment to supporting the seamless transitions and supporting initiatives in high schools. Teacher prep programs.
- **Rep. Brooks:** Expanding awareness of the dual credit opportunities as there isn’t a financial limitation, all high schools ought to be using it. Work on dual enrollment to increase the number of students that participate. Working with college of education and the rigor being demanded. Work to fund what is recommended by the governor.



- **Jerry Boyd:** Elevate the voice of the students. Keep the voice on the students. Leverage this knowledge to help the stakeholders in the district who have already begun the work. Focus on the why. Supporting those that are doing the work, including school counselors clarify their focus. Removing barriers and support with the tools.
- **J.D. Faulconer:** When I was a student, all didn't always mean all. Refreshing to see all now does mean all. High school students have the opportunity to do something postsecondary and take CTE and a concentrator. Have to be the advocate for all means all.
- **Sterling VanDerSpuy:** It's about agility. Through our WIA plan we engage education and engage partners at ECD. The school to work act work started much of this. We're considering how to create an agile system that transforms the public education space? Drive to 55 is an asset, and need to think about the pipeline. Economic opportunity needs to be holistic with the community, we need to see the two-generation approach through, and the workforce piece is key to overcoming some of these barriers. We still need to think about the students that don't get TN promise and how to still connect them with employers.
- **Ann Thompson:** ECD is at the table and wants to figure out the how. ECD can help through data and reports and market them so that they are easily understandable and targeted. Focus on business education connection. How can we create strategies to connect businesses to education? Create 10 steps. Create the toolbox to share. Special emphasis should be placed on rural and distressed counties.
- **Eddie Pruett:** Early postsecondary opportunities. Students have access, but need to work on industry certifications. Counselors need to meet with students earlier in their educational careers to have those rigorous discussions. Counselors and principals making a program of study.
- **Laura Moore:** 10,000 paid internship opportunities through the Mayor's office and connections through academies. That is a great partnership opportunity for connections and pathways. Participating in asset mapping through pathways so we can begin postsecondary opportunities before high school. We are P-20 data passionate and want the data.
- **Arlette Robinson:** Excited to have a definition and way to drive the plans. We will work with the team and stakeholders to work on these objectives. For the council for CTE and directors for CTE President, this task force has been the "what and the why" of our work. Hearing labor say these are the areas of need helps us align. I can take this information to CTE directors across the state to drive this work.
- **Rebecca Leech:** Committed to committed quality work place learning capstone experiences. Work on finding new and innovative ways to support student who are falling behind on their career plans.
- **Debby Shedden:** I will be a voice and carry these recommendations back to board of directors and the information. Carry this back to local school board in Hawkins County to work to find opportunities to be successful. Pioneers of the work ethics diploma. Working to increase partnerships for internships. Tennessee is at the forefront of what is happening in education.



- **Missy Blissard:** Thank you for acknowledge the counselor ratio should be lowered. Will go back and discuss dual enrollment but opening it up to more than just the select high achieving students and more conversations on dual credit.

### **Closing from the Commissioner**

We commit to keep the conversation going, particularly along and how we need to be communicating it, simplifying it, and providing access to data. The more we do to think about the individual student and the pathways for each student helps us reach our equity goals. This all boils down to the individual work we do with students. The student councils across the state helped us find and analyze student needs that we may have not listened to otherwise.

We are going to take your feedback and make a draft to get another round of feedback. Thank you for your commitment over the course of these past six months; we will reach out to our sub groups for further analysis. Thank you!



To: Members of the Career Forward Taskforce

From: Danielle Mezera, Assistant Commissioner, College, Career and Technical Education

Date: 2016

**Subject: Follow-up from meeting on August 24, 2016**

### **Meeting Overview**

The sixth meeting of the Career Forward Task Force was held on August 24, 2016, at the First Amendment Center in Nashville, Tennessee. The primary purposes of the meeting were to (1) review and discuss the task force's draft Ready Student definition, guiding principles, and recommendations; (2) reflect on how task force members can shape student readiness moving forward.

Dr. Candice McQueen, commissioner of education, began the meeting by framing the upcoming discussions within the context of the taskforce's charge and guiding questions. Dr. McQueen noted that the Department will draw from what resonates in the day's discussions to help prioritize the final set of recommendations.

### **Review of Definition, Guiding Principles, and Recommendations**

Dr. Danielle Mezera, assistant commissioner of college, career, and technical education, led a review of the draft Ready Student definition, guiding principles, and recommendations. Dr. Mezera noted that the definition is intentionally aspirational, as it should serve as a north star for how Tennessee aims to align the K-12, postsecondary, and industry communities towards a common readiness goal. Similarly, the guiding principles should frame and help prioritize the task force's final recommendations. Participants commented on the specificity and comprehensiveness of certain recommendations, and whether initiatives required under Every Student Succeeds Act (ESSA) could help pare down the number of recommendations. Dr. Mezera encouraged these and similar comments to help the Department prioritize and mark recommendations for further revision.

Participants then discussed these documents in small groups before reconvening for a group reflection. Notes from the small groups are provided as supplementary documents.

### **Going Forward: A Ready Student Panel Discussion**

To frame work going forward, Dr. Mezera facilitated a discussion featuring the following panelists: Dr. Candice McQueen, commissioner of education; Burns Phillips, commissioner, Tennessee Department of Labor and Workforce Development; Dr. David Gregory, interim chancellor, Tennessee Board of Regents; Mike Krause, executive director, Tennessee Higher Education Commission; Ted Townsend, chief operating officer, Tennessee Department of Economic and Community Development. Complete notes from the panel are provided in supplementary documents.

Panelists concurred that the business and education communities are only just beginning to recognize and act on the substantial overlaps in skills necessary for postsecondary and workforce success. Regarding how the business community can be involved in ensuring students graduate



prepared for the workforce, panelists suggested that local educators and industry should strive for intentional, sustainable partnerships. Each panelist affirmed that strong local leadership sharing a common language can build pathways around local needs, whether towards postsecondary or workforce opportunities.

### **Bringing it Home: Salient Points**

Dr. Mezera led a final group debrief, challenging each task force member to reflect on the prior six months and state how they or their organization will commit to ensuring that the task force's work continues. Common themes among these statements included committing to securing support from local chambers of commerce and school boards, ensuring that partnerships go beyond surface-level meetings, championing TN Promise and dual enrollment, and embodying "All Means All" to remove distinctions between postsecondary and career-bound students.

### **Closing**

Dr. McQueen closed the meeting by thanking the participants and reminding them that holding their individual commitments mirrors the State's commitment to equity across each individual student. The Department will take the day's comments and apply them to the draft report, which members will receive for an additional feedback opportunity.

### **Contact Information**

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Appendix III:  
Meeting Handouts and  
Articles

# THE CHALLENGE

Education and training systems around the world are failing the most economically vulnerable young people. As economies have evolved to require a more skilled workforce, young workers need education or training beyond high school in order to find well-paying jobs that enable them to join the middle class. Without opportunities to gain early work experience, develop skills and obtain meaningful postsecondary credentials, the number of young adults who are disconnected from the workforce will continue to grow.

## HIGH SCHOOL GRADUATION

Non-graduates earned a median annual wage of about \$24,000...

...compared with about \$42,000 for graduates.<sup>1</sup>

## POST-SECONDARY EDUCATION OR TRAINING

Nearly all high school seniors intend to graduate from a four-year college...  
...but only half go on to do so.<sup>4</sup>

One of the most common reasons students fail to complete their study is that they need to start earning a living or supporting their family immediately.<sup>5</sup>

While the overall U.S. high school graduation rate reached an all-time high of 82% in 2014<sup>6</sup>, only about 60% of students in high-poverty urban districts graduate.<sup>7</sup> Workers who don't graduate from high school face dwindling job prospects, lower wages and fewer opportunities to join the middle class.

## NEITHER WORKING NOR IN SCHOOL

5.5 million people age 16 to 24,<sup>9</sup>

22% of black young adults,<sup>10</sup>

1 in 5 Latino young people in 10 U.S. metro areas.<sup>11</sup>

Young people who are disconnected from school and work go on to earn lower wages when they do find work, pay fewer taxes and rely on social services more than their at-work or in-school peers.<sup>12</sup>

## SKILLED WORKFORCE

About one-third of American companies report having openings for which they cannot find qualified workers.<sup>3</sup> Failing to prepare young people with the right skills and education for these jobs is not just a missed opportunity for youth, it is a missed opportunity for businesses to hire the talent they need to grow and compete.

Just over half the population has a meaningful postsecondary credential...  
...one that will allow them to compete for a well-paying job at age 25.<sup>8</sup>

By their mid-20s, only 32% of young Americans have graduated from a four-year institution, 10% have obtained a degree from a two-year college and about 10% have acquired a recognized occupational certificate.<sup>7</sup>

Recent education reform efforts have made progress raising academic standards to increase college readiness. However, without a similar focused effort to equip youth with the knowledge, skills, personal attributes and work experience required to be career-ready, young people will continue to lack the preparation to succeed in an increasingly skilled workforce.

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  - 12 Sarah Ayres. (2013). "The High Cost of Youth Unemployment." Center for American Progress. Retrieved from: <https://www.americanprogress.org/issues/labor/report/2013/04/05/59428/the-high-cost-of-youth-unemployment/>.
- Disclosure: Author is currently employed by JPMorgan Chase.

# Tenn. study: Half of all jobs could be replaced by automation

By [Chambers Williams](#) of the Knoxville News Sentinel  
March 20, 2016

A gloomy report on the future job market in Tennessee, released this past week by the state, suggests that up to 1.4 million people, or half of all current workers, are susceptible to losing their jobs to automation.

Called the "Tennessee Workforce Disruption Index," the report details findings of a study by the Center for Economic Research in Tennessee, which is part of the state's Department of Economic and Community Development.

The department's commissioner, longtime Knoxville businessman and entrepreneur Randy Boyd, called the study "a seminal piece of work." "It's pretty important information, and it would be very scary if we didn't have a solution," Boyd said.

But as dire as the report makes the situation sound, such a massive loss of jobs could be avoided by shifting educational resources toward training workers for the new career opportunities that such automation would necessarily create, he said.

"The solution is our 'Drive to 55' initiative, whose goal is to raise post-secondary educational attainment" in Tennessee from the current 37 percent of the population to at least 55 percent, Boyd said.

"The people who are at risk don't have post-secondary skills," he said. "Drive to 55 is already addressing that. The bad news is that if we do nothing, 1.4 million people — or 50 percent of our workforce — could lose their jobs.

"But if we succeed, not only will there be jobs, but those jobs will create additional income — \$9.3 billion annually. So if we fail, it's cataclysmic. If we succeed, it's glorious."

According to the report, automation doesn't eliminate the need for labor; it changes the way the workplace is configured, and makes new demands on educational facilities on how the workforce should be trained.



"History demonstrates that a shift toward heightened technological demands of the business community does not likely coincide with declining demand for labor," reads the report.

"Automation of workplace tasks will displace workers, but not replace workers.

"Rather than eliminating labor, automation is likely to reshape the distribution of jobs. New jobs will be created and individuals will shift toward existing jobs requiring the unique abilities, knowledge and high-level skills that our future workforce will demand."

In Knoxville, that shift in education is underway, with industrial maintenance and mechatronics programs already training students at the Tennessee College of Applied Technology for jobs that are in high demand, said the school's assistant director, Kasey Vatter.

Tuition is free for qualifying students under the Tennessee Promise program, which applies to recent high school graduates and adults seeking career training, she said.

"These programs in the past two years have had an average student age of 27 or older, but that's shifting younger with Tennessee Promise, which is attracting college-age kids," she said.

"But the programs also attract a lot of older people who are retraining for new careers."

Among those older students in the industrial maintenance program at the school on Liberty Avenue is Brad Wieger, 45, of Clinton. Unemployed for now, he said he had worked in maintenance for more than 15 years, but found himself falling behind with new technology coming into the workplace.

"I realized I needed more skills to get a better job or even keep a job," he said. "I have maintenance experience, but I need the PLC (Programmable Logic Controller) training that companies are now requiring."

PLCs are at the core of much of today's automated equipment in the workplace, and learning how to program and troubleshoot PLC circuits is necessary for most of today's advanced industrial equipment, said Mike Gallimore, the lead instructor for the industrial maintenance programs at TCAT-Knoxville.

"It's a 16-month program, involving basic maintenance, basic electricity, PLCs and minor robotics," said Gallimore, who worked for Denso Corp. in Maryville for 21 years before turning to teaching.

"We start them with the basics, and work them through the more complicated subjects," he said.

"But when they're finished, the job opportunities are waiting for them. And these graduates are in great demand. Along the I-75 corridor, there are 15 jobs waiting for each qualified applicant."

Starting pay beats a lot of entry-level jobs that workers with little or no education beyond high school would be able to fill, Gallimore said.

"People leaving our program see typical starting pay of \$18-\$20 an hour," he said. "And we can't turn these students out fast enough. The jobs and opportunities are out there, they just need the training. About 53,000 jobs became available nationwide in industrial maintenance last year, but there were only 13,000 people trained to take those jobs."

J.T. Roberts, 18, of Townsend is one of Gallimore's students. He started the program in September.

Although he already has a job at Denso, Townsend is taking the classes "to further my career in industrial management and get a higher-paying position either at Denso or somewhere else," he said. "It's very interesting work, and there are plenty of maintenance jobs out there."

Matt Nauman, 20, of Karnes will finish the program in April, and already has prospects for a good job, he said. "I'm getting a great education, with lots of hands-on work, and when I'm finished, there are lots of jobs available," he said.

There also are students sent to the school by their employers to get additional training under an arrangement TCAT has with several area manufacturers, Gallimore said.

"I have four students from Eagle Bend Manufacturing in Clinton who were selected by their company to transition from production to maintenance," he said. "They're learning welding, machine tooling and other skills. And Eagle Bend guarantees them higher-paying maintenance positions when they complete their training."

Six evening students from Knoxville's Gerdau Steel are learning PLCs and basic electrical systems at the school so they can be maintenance technicians at that company, he said.

Boyd said the state's educational facilities, especially those geared toward career training, are focused on getting students ready for real careers that will be relevant to the future. Collaboration between educators and industry is the key to matching students with real jobs, he added.

"It's all about finding what industry needs," he said. "I remind my business partners that we have to be engaged in education. We can't just be cheerleaders. We have to visit the employers, and the employers must visit the schools."

Part of the process involves getting kids interested in technology careers as early as middle school, Boyd said. There are programs in middle and high schools that point students toward these careers and get them started on their training.

Sometimes it's a hard sell, though, Boyd said.

"We're trying market research to find out what is keeping young people from going to these programs," he said. "Are their parents discouraging them? We're doing some advertising to promote these jobs and raise awareness with students and parents that these are opportunities they need to take advantage of."

"We have done this to ourselves, with parents showing their kids pictures of people working in (old-style) factories, telling them, 'If you don't go to school, this is where you'll end up.' A big part of it is communication."

Today's factories aren't like that, Boyd said. They're modern workplaces with state-of-the-art robotics and automation.

The good news for Knox County is that it is 93rd lowest on the list of Tennessee's 95 counties for the potential loss of jobs to automation, according to the report. "Here, we already have a highly educated workforce, thanks to TVA, Oak Ridge and UT," he said. "People with post-secondary success usually have children who do, too."

"But outside of Knox, we're surrounded by counties that are distressed. Twenty-one of the state's counties are distressed, and a bunch of those are just north of us, with a whole section in the bottom 10 percent of the entire country."

Those include Campbell and Claiborne counties. Loudon and Sevier also rank high on the list of counties with high potential for job interruption, according to the report.

"Rural counties are more vulnerable to the disruptive effects of automation," the report notes.

"Of Tennessee's 17 urban counties, only three — Hamblen, Loudon, and Bradley — are ranked in the most vulnerable two-thirds of Tennessee counties."

"The solution for them is education," Boyd said, especially the technical schools, where students "don't have to have as much academic preparedness. "The career training the tech schools offer is "cheaper, quicker, and in high demand," he said.

"The biggest challenge is to let people know this is the place to go," he said. "All of it is free now, so there is no excuse not to take advantage of it." Yet he acknowledges that there might not be enough programs to handle those looking to take advantage of the opportunities available. "In some cases, in certain fields and schools, there are waiting lists," Boyd said. "That's something we have to fix."

#### KEY FINDINGS:

- 1.4 million Tennessee jobs have a high probability (70 percent or higher) of replacement by automation. This represents 50 percent of Tennessee's current workforce. Vulnerable jobs as a share of total employment range from 35.7 percent in Bledsoe County to 59.6 percent in Sevier County.
- Lower-wage occupations are more vulnerable to replacement by automation. The average hourly wage of jobs with a 70 percent probability of automation is \$14.56, which is \$5 lower than the state's current average hourly wage for all jobs.
- If automation occurred in the occupations with at least a 70 percent probability of automation, 37 percent of the wages of workers in Tennessee could be lost.
- Rural counties are more vulnerable to the disruptive effects of automation. Of Tennessee's 17 urban counties, only Hamblen, Loudon, and Bradley are ranked in the most vulnerable two-thirds of Tennessee counties.
- Tennessee regions most vulnerable to future workforce disruption are Northwest Tennessee and the Upper Cumberland. The Northern Middle and Greater Memphis regions are least vulnerable.
- Within the Southeast states, Tennessee is ninth-most vulnerable to future workforce disruption, where a rank of one represents high vulnerability and a rank of 12 represents low vulnerability. Virginia is the least vulnerable state (12); Mississippi is the most vulnerable.

**Robert Schwartz**

Robert Schwartz is Professor Emeritus of Practice in Educational Policy and Administration. He held a wide variety of leadership positions in education and government before joining the HGSE faculty in 1996. From 1997 to 2002, Schwartz also served as president of Achieve, Inc., an independent, bipartisan, nonprofit organization created by governors and corporate leaders to help states improve their schools.

From 1990 to 1996, Schwartz directed the education grant making program of The Pew Charitable Trusts, one of the nation's largest private philanthropies. In addition to his work at HGSE, Achieve, and The Pew Charitable Trusts, Schwartz has been a high school English teacher and principal; an education adviser to the mayor of Boston and the governor of Massachusetts; an assistant director of the National Institute of Education; a special assistant to the president of the University of Massachusetts; and executive director of The Boston Compact, a public-private partnership designed to improve access to higher education and employment for urban high school graduates.

Schwartz has written and spoken widely on topics such as standards-based reform, public-private partnerships, and the transition from high school to adulthood. In recent years Schwartz has contributed to three volumes published by Harvard Education Press: *Teaching Talent* (2010), *Surpassing Shanghai* (2011), and *The Futures of School Reform* (2012). He currently co-leads the Pathways to Prosperity Network, a collaboration among a group of states, HGSE, and Jobs for the Future designed to ensure that more young people graduate high school, attain an initial postsecondary degree or credential with value in the labor market, and get launched on a career while leaving open the possibility of further education.

**Maura O Banta**

Maura O. Banta is IBM's Director of Citizenship Initiatives in Education. She joined IBM in 1973 as a marketing representative and held positions in Sales, Insurance Industry Consulting and Marketing Management before joining the Corporate Citizenship Department.

In 2006 Maura was named Eastern Regional Manager for IBM's corporate philanthropy, government relations and community relations. She assumed her current role in 2012.

Ms. Banta is a board member of the Massachusetts Taxpayers Foundation, the Boston Plan for Excellence, The Rennie Center for Education Research and Policy, and The Carroll School of Management at Boston College. Maura is a former chair of the board of the Mass Business Alliance for Education. She served for 6 years on The Massachusetts Educational Management and Audit Council under both Governor Swift and Governor Romney. Maura chaired the Massachusetts Board of Elementary and Secondary Education from 2008-2014 under an appointment by Governor Patrick. In 2014 Governor Patrick appointed Maura to the Board of Higher Education.

## **P-TECH 9-14 SCHOOL MODEL**

P-TECH schools are innovative grade 9 to 14 public schools that create clear pathways from high school to college and career for young people from all academic backgrounds. P-TECH students are not pre-screened for admission. In six years or less, they graduate with a high school diploma and a no-cost, two-year associate degree in a growth industry field. Each P-TECH school works with a corporate partner and a local community college to ensure an up-to-date curriculum that is academically rigorous and economically relevant. Hallmarks of the program include one-on-one mentoring, workplace visits and skills instruction, paid summer internships and first-in-line consideration for job openings with a school's partnering company.

P-TECH graduates are fully prepared to begin middle-class careers in the 21<sup>st</sup> century workplace, continue their educations at the four-year college and university level and beyond, or both. By 2016, the replicable and sustainable P-TECH model will encompass a network of more than 60 schools serving thousands of students in the U.S. and Australia. Together, these schools are spearheading an international effort to reform and revitalize career and technical education (CTE).

### **Why P-TECH Matters**

P-TECH matters because current CTE programs are substantially out of sync with the present and future demands of industry. In the U.S. alone, there are 28 million “middle-skill jobs” – jobs that require an associate degree or similar technical training, but not a four-year degree – with 14 million additional jobs coming online by 2018. The fastest growing and highest paying sectors of the job market are those requiring proficiency in STEM (Science, Technology, Engineering, Mathematics) fields. But fewer than one-third of U.S. students are adequately prepared in STEM.

While U.S. high school graduation rates have improved markedly, postsecondary completion rates and the quality of skills training have not. Forty-three percent of U.S. community college students require remediation, and fewer than 25 percent of them will earn their “two-year degree” within eight years. For low-income Americans and young people of color, the statistics are dramatically worse. What awaits them and others without postsecondary degrees and middle-skills job training are part-time, no benefits jobs paying less than \$15 per hour (with sporadic or seasonal availability), and the life of the working poor.

P-TECH was designed to help break the cycle of poverty and address skills gaps in the labor force by preparing urban, suburban and rural young people from all backgrounds for academic achievement and skilled, middle-class employment. In 2011, working with the New York City Department of Education and The City University of New York, IBM created a program design that would link education to economic development and illuminate a pathway from high school to college and career.

### **9-14 Model Tenets and Featured Components**

P-TECH is distinct from other “early college” model schools in significant ways:

- P-TECH schools are “open admissions,” meaning there is no testing for admission. P-TECH does not “cream” or “cherry pick” its students.
- As part of a scope and sequence connected to an associate degree in an in-demand STEM field, P-TECH students take full-credit college courses beginning in the summer between grades 9 and 10.
- Each P-TECH school is a collaboration among a school district, a community college and a corporate partner to ensure a rigorous curriculum that maps directly to current and future job market needs.
- Each P-TECH student has a mentor, experiences workplace learning embedded in a strong academic

curriculum, and benefits from structured workplace visits and paid internships. Successful graduates are placed first in line for jobs with his or her school's industry partner.

**Focus on Public Schools:** P-TECH schools are public schools, open to all students without admissions testing or cost to them or their families.

**Focus on Early College:** At P-TECH, "college begins in ninth grade." Students take full-credit college courses as early as the summer between ninth and 10<sup>th</sup> grades as part of a six-year scope and sequence of academic and workplace learning. Graduates earn their high school diploma and a two-year associate degree from their school's college partner.

**Focus on Careers:** As collaborative partnerships among school districts, community colleges and employers, P-TECH programs map their academic and workplace skills curricula directly to 21<sup>st</sup> century labor market demands. Program curriculum features include:

- Continually sequenced and updated workplace learning informed by current and future industry standards
- One-on-one matching with adult mentors from each school's partnering company
- Project-based learning activities and experiences, including workplace visits, paid internships and guest speakers from employers

**Focus on Mastery Through Personal Pathways:** Each P-TECH student moves through a personalized academic and career readiness sequence, aligned to college and career requirements. Teachers and advisors closely monitor each student's program and progress based on his or her individual needs and performance. The focus is on mastery, not seat time.

### **A Model for Replication**

The first P-TECH school opened in Brooklyn, New York in September 2011 as a collaboration among the New York City Department of Education, The City University of New York, the New York City College of Technology ("City Tech") and IBM. There are now 40 P-TECH model schools nationwide:

- 31 across New York state
- Four in Connecticut
- Five in Illinois (Chicago)

In 2016, new P-TECH schools will open in Colorado, New York and Rhode Island, and the first global replication of the model will take place in Australia – which will open two new schools.

### **The Playbook: [www.ptech.org](http://www.ptech.org)**

IBM invented P-TECH, and created the P-TECH 9-14 School Model Playbook website ([www.ptech.org](http://www.ptech.org)) to serve as the central hub for public-private partnerships interested in learning about and implementing this groundbreaking school reform model.

The site details elements of the P-TECH model, and provides action-oriented guidance and tools to enable public-private partnerships to implement the model effectively. The guidance includes a series of P-TECH model schools case studies that illustrate the strategies and tactics required for P-TECH partnerships to replicate the model's outstanding results.

## **SNAPSHOTS OF IBM'S FOUR P-TECH SCHOOLS:**

### **PATHWAYS IN TECHNOLOGY EARLY COLLEGE HIGH SCHOOL (P-TECH Brooklyn): Brooklyn, New York**

In June 2015, six young scholars from Brooklyn P-TECH completed requirements for their Associate in Applied Science degree from the New York City College of Technology in their fourth year at the school – two full years ahead of schedule. Three of these graduates have joined IBM full-time: two as associate analysts in market development and one as a digital commerce specialist. The remaining three graduates are continuing their educations at four-year colleges and universities.

#### **Leadership and Staff**

- Founding Principal: Rashid Ferrod Davis
- 29 teachers, 3 assistant principals, 4 guidance counselors, 1 business manager, 4 central office staff, and full-time liaisons from City Tech and IBM

#### **Student Profile**

- 522 total student population
- 74% boys; 26% girls
- 96% Black or Hispanic
- More than 80% of students qualify for free or reduced lunch
- 16% of students have Individualized Education Programs (IEPs)
- Average attendance rate is 90%

#### **Academic Achievements**

- 265 students (over 50%) enrolled in college courses
- 88% of graduates in 2015 met college ready benchmarks—top amongst unselective NYC high schools

To remain in good academic standing at the college, students must meet minimum GPA requirements:

- 66% of students who have attempted 1 – 12 credits are in good academic standing (GPA 1.5+)
- 64% of students who have attempted 13 – 24 credits are in good academic standing (GPA 1.75+)
- 90% of students who have attempted 25+ credits are in good academic standing (GPA 2.0+)

#### **Legacy Cohort (entered 9<sup>th</sup> grade in Fall 2011)**

- 11 students have earned associate in applied science (AAS) degrees in computer information systems
- 15 students are on-track to complete their AAS degrees by June 2016
- 78% of the cohort (76 total students) completed paid internships, most with IBM
- 70 students (72%) have passed at least one college technology class with C or better

#### **Cohort R: entered grade 9 in 2012**

- 11 students on track to earn degree within four years, in June 2016
- 24 students have earned more than a year's worth of college credits (24+)
- 20 students have earned between a semester and a year of college credits (12-24)
- 37 students earned a semester's worth of college credits (12)

#### **Cohort S: entered grade 9 in 2013**

- 17 students have more than a year's worth of college credits (24+)
- 12 students have earned at least a semester's worth of college (12+)
- 21 additional students have some college credits after only 2.5 years of high school



## SARAH E. GOODE STEM ACADEMY: Chicago, Illinois

Launched in September 2012, Sarah E. Goode STEM Academy is a partnership among the Chicago Public Schools, Richard J. Daley College of the City Colleges of Chicago and IBM.

### Leadership and Staff

- School Leadership: Principal Armando Rodriguez, Assistant Principals Tyrese Graham and Rufino Bustos, Resident Principal Elizabeth Wontor-Leach
- 53 teachers, one STEM Program Manager, one Early College & Career Coordinator, three Counselors, one full-time IBM liaison and one full-time Richard J. Daley College liaison

### Student Profile

- 835 total student population
- Approximately 50% male, 50% female
- 97% Black or Hispanic
- More than 88% of students qualify for free or reduced lunch
- **93% average attendance for 2014 – 15** (District average is 90%)

### Academic Achievements

- **188 students are enrolled in college classes** (Spring 2015)
- Of 12<sup>th</sup> grade students, **17 have earned a total of 20 or more college credits**, and are eligible to complete an Associate in Applied Sciences (A.A.S.) or Associate of Science (A.S) degree in Computer Science, Web Development or Networking Technology by December 2016
- **22 additional students** are on track to complete their associate degree by spring 2017 – within five years of starting at Goode
- **150 10<sup>th</sup> grade students** completed a full-credit Geometry course in summer 2015 to accelerate their high school credits and prepare themselves to begin college courses
- Of students at Goode who have taken or are taking college course:
  - 93 have earned between 3 and 6 college credits
  - 59 have earned between 9 and 15 college credits
  - 42 have earned between 16 and 27 college credits
  - 42 have earned more than 30 college credits

## **NORWALK EARLY COLLEGE ACADEMY (NECA): Norwalk, Connecticut**

Opened in August 2014, Norwalk Early College Academy (NECA) was developed in collaboration among the Norwalk Public Schools, Norwalk Community College and IBM. NECA is Connecticut's first P-TECH 9-14 school. Graduates will earn an Associate in Applied Science degree in either Software Engineering or Mobile Programming. Connecticut opened three additional P-TECH 9-14 schools – known as Connecticut Early Opportunity (CT-ECO) schools – in fall 2015.

### **Leadership and Staff**

- Founding School Director, Karen Amaker
- 6 teachers, 1 full-time IBM liaison, 1 part-time high school liaison
- Student/Teacher ratio is roughly 26:1

### **Student Profile**

- 153 students
- 61% male; 39% female
- 48% Hispanic; 34% Black; 14% White; 4% Asian

### **Academic Achievements**

- 40% of students placed into college-level English and mathematics by the end of Year 1
- 28% of students achieved high honor roll (GPA of 3.4 or higher)
- 22% of students achieved honor roll (GPA of 3.0 – 3.39)

## EXCELSIOR ACADEMY: Newburgh, New York

Excelsior Academy is a partnership among the Newburgh Enlarged City School District, the State University of New York at Orange (SUNY Orange) and IBM. The first program of its kind in the region, Excelsior Academy provides students with the opportunity to earn an Associate in Applied Science (A.A.S.) degree in either Computer Networking (C.I.T.) or Cyber Security in addition to their high school diploma. Housed within Newburgh Free Academy, North Campus, Excelsior Academy is one of 16 P-TECH high schools that opened in fall 2014 as a part of Governor Andrew Cuomo's New York State P-TECH grant. Excelsior Academy students benefit from a small-school environment in which teachers and staff plan each student's program collaboratively.

### Leadership and Staff

- Founding Leadership: Excelsior House Principal Kevin Rothman and Newburgh Free Academy Principal Matteo Doddo
- 4 dedicated teachers, 3 part-time teachers, 2 SUNY Orange adjunct professors, 1 guidance counselor, 1 full-time IBM liaison, 1 full-time SUNY Orange college liaison

### Student Profile

- 100 students (50 ninth graders; 50 10<sup>th</sup> graders)
- 54% male; 46% female
- 54% Hispanic, 32% Black, 13% White, 1% Asian
- 74% of students qualify for free or reduced lunch
- 8% of students have Individualized Education Programs (IEPs)

### Academic Achievements

- **95% attendance rate through January 2016** (4% higher than District high school average)
- **83.3% overall student average** (Year 1 and 2)
- **42%** of student body made honor roll during 1<sup>st</sup> semester of 2015-16 school year (85% overall average or higher)
- **96% pass rate:** New York State Regents Exam for U.S. History
- **83.7% pass rate:** New York State Regents Exam for Algebra I
- **78% (39 of 50) 10<sup>th</sup> grade students** enrolled in college coursework during fall of 2015-16 school year. Of these students:
  - **35/39** earned a least a C in their first semester of college coursework.
  - **15 students** are on track to earn **13 college credits** by the end of the 2015-16 school year
  - An additional **22 students** are on track to earn **7 college credits** by the end of the 2015-16 school year

**READ MORE ABOUT IBM P-TECH (Click on titles to access stories)**

[P-TECH: The School That's Taking Over the World. \*Black Enterprise\*, August 7, 2015](#)

[Educating Technologists. \*The Economist\*, July 16 2015](#)

[Why IBM's CEO Is Hiring Teens. CNN, July 15, 2015](#)

[From High School Calculus Straight to a Job at IBM. \*FastCompany\*, June 18, 2015](#)

[Proving P-TECH Success. \*US News & World Report\*, June 8, 2015](#)

[The Reinventing of the American High School. \*National Journal\*, August 28, 2014](#)

[Why Six Years for High School is Catching On. \*PBS NewsHour\*, April 9, 2014](#)

[The School That Is Changing American Education. \*TIME Magazine\*, February 13, 2014](#)

## The Every Student Succeeds Act (ESSA)

## Intersections and Opportunities for Career Technical Education

The Elementary and Secondary Education Act (ESEA) is the primary federal law governing most national elementary and secondary education programs. Originally passed in 1965, ESEA was last reauthorized in 2001 as the No Child Left Behind Act (NCLB). In 2007, NCLB's authorization expired and the law had been due for renewal since that time.

In 2015, Congress successfully passed the Every Student Succeeds Act (ESSA), which reauthorizes the law through 2020. The new ESEA legislation seeks to remedy many common criticisms of NCLB, particularly the federal government's expanded role in K-12 education under NCLB, by providing states and local school districts with significant flexibility regarding how to implement the elements of the new legislation while also significantly reducing the federal footprint in the nation's schools.

ESSA's emphasis on state and local autonomy will provide many opportunities for innovation and experimentation in the K-12 education environment, particularly with regards to Career Technical Education (CTE). While there are many provisions in ESSA that hold promise for the CTE community, it will be incumbent upon states to implement the law in such a way that fully leverages the potential of CTE.

Below is an analysis of the new law with a particular emphasis on these points of opportunity for the CTE community. Please note that all citations, unless otherwise specified, correspond to the enrolled version of ESSA, which can be accessed [here](#).

### Timeline for Implementation

Many of ESSA's provisions became effective on December 17, 2015 — the day ESSA was signed into law. However, given that most ESSA programs are forward-funded (i.e. provided in advance), the most recent Fiscal Year (FY) 2016 appropriations legislation superseded some of the law's embedded timelines.

It is important to note that many of the legislation's "big" pieces, such as new the state ESSA accountability systems and plans, are required to go into full effect at the start of the 2017-18 school year.<sup>1</sup> Another important deadline states should be aware of is August 1, 2016 — the day existing state ESEA waivers will expire.<sup>2</sup>

At present, it is not clear when states' ESSA plans will officially be due for submission to the U.S. Department of Education (USDE) for approval. The federal rulemaking process, which will likely begin in late spring 2016, will make that deadline clearer. Given that states' new accountability systems for ESSA must be operational by the 2017-18 school year, Advance CTE anticipates the deadline for state ESSA plan submission to be sometime in 2017, following the federal rulemaking process.

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<sup>1</sup> Sec. 5(e)(1)(B)

<sup>2</sup> Sec. 4(c)

## Limits on the Role of the U.S. Secretary of Education

A recurrent theme throughout ESSA is a regression of the federal role in K-12 education. The new law contains a number of provisions that will significantly limit the U.S. Secretary of Education's responsibilities and authority with regards to the implementation of ESSA. As a result, the Secretary is prohibited from requiring the following as a condition for approving a state plan or waiver (Note: this list is not exhaustive):<sup>3</sup>

- Requiring states to add new / additional requirements to the state plan;
- Requiring states to add or delete specific elements to their standards;
- Prescribing specific assessments or items to be used in assessments;
- Prescribing specific goals for state progress under their new accountability system
- Prescribing specific accountability indicators that states must use;
- Prescribing the weight a state's accountability measures should have;
- Prescribing a specific methodology that states must use to differentiate and identify low-performing schools; and
- Prescribing school improvement strategies or exit criteria.

The Secretary is also strictly prohibited from issuing new non-regulatory guidance that could be construed as falling beyond the scope of the requirements contained in Title I of ESSA.<sup>4</sup> The law also prevents USDE from developing non-regulatory guidance that, "purports to be legally binding," or that requires additional data collection beyond existing federal, state, and local reporting requirements.<sup>5</sup>

## ESSA: A General Provision of Note

**Four-Year Authorization Period:** ESSA authorizes programs for four years in total, rather than a longer period of time that is much more common for reauthorization efforts of this size.<sup>6</sup> This decision was made intentionally to allow the next president to revisit the law if they would like to.

**Specific Authorization Levels:** ESSA prescribes specific authorization levels for each of the Titles contained in the new law. It is important to note that these funding levels are merely suggestions from the law's authors. Congressional appropriators must ultimately decide how much each of these sections of the law receives through the annual budget and appropriation process in Congress. As a result, Congressional appropriators may choose to ignore these authorization levels and appropriate funds at a higher or lower level than those suggested in the statute.

**Title I-Part A:** Maintains same basic architecture for Title I aid and makes no changes to underlying formula determining state allocations. Grants made under this section of the law will continue to flow to local school districts serving high numbers and percentages of students from low-income families.

**Standards:** Maintains NCLB approach of standards-based reform by requiring states to establish "challenging" academic standards in English / Language Arts (ELA), Mathematics and Science. The USDE

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<sup>3</sup> Sec. 1111(e)

<sup>4</sup> Sec. 1111(e)(1)(A)

<sup>5</sup> Sec. 1111(e)(1)(C)

<sup>6</sup> Sec. 1002

is expressly prohibited from developing these standards or encouraging their development monetarily or otherwise.

**Assessments:** Maintains requirements for annual assessments in ELA, Mathematics and Science in grades 3 through 8 and at least once in high school.

**Accountability:** ESSA repeals NCLB’s “Adequate Yearly Progress” (AYP) provisions with a state-defined accountability system based on “multiple measures,” each disaggregated by student subgroups:<sup>7</sup>

- Annual assessments in subjects noted above;<sup>8</sup>
- High school graduation rates;
- Another “academic” indicator for elementary and middle schools;
- English language proficiency for ELL students; and
- At least one indicator of “school quality or student success”.

**School Interventions:** Starting in the 2017-18 school year, states must identify and intervene in the lowest-performing 5 percent of schools.<sup>9</sup> While earlier versions of ESSA proposed specific school-wide intervention strategies for states, the final version forgoes this type of prescriptive guidance in favor of maximum flexibility for states in the identification and intervention processes (see also: *Limitations on the Role of the U.S. Secretary of Education*).<sup>10</sup> As such states have the ability to incorporate CTE into their turnaround strategies for schools and districts if they choose to do so. However, this decision will ultimately be left to the SEA’s discretion and ESSA makes clear that states, not federal law or USDE, will determine how to turn around low-performing schools.

**Public Accountability:** ESSA maintains the requirement that states and school districts publish report cards that make publicly available information related to the state’s accountability system and a host of other important information.<sup>11</sup>

**Program Consolidation:** ESSA consolidates or eliminates 49 existing programs into a new block grant called “Student Support and Academic Enrichment Grants”.<sup>12</sup> More information related to these grants and funding opportunities for CTE can be found in the Title IV section of this document.

**Maintenance of Effort (MOE):** ESSA maintains the current 90 percent MOE requirement, but strengthens the process for states to waive this requirement in exceptional circumstances (such as a natural disaster or a change in the organizational structure of the state) and gives states a transition period of one year for meeting this requirement if it has done so in the previous five years.<sup>13</sup>

**Supplement, not Supplant (SnS):** ESSA broadly maintains this requirement, but will now only require states to demonstrate compliance every two years rather than annually. Further, states and local districts will have additional flexibility when having to demonstrate that individual costs are

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<sup>7</sup> Sec. 1111(c)

<sup>8</sup> Sec. 1111(c)(C)(ii). *It is important to note that this measure must be weighted substantially higher than all other indicators in a state’s accountability system.*

<sup>9</sup> Sec. 1111(c)(4)(D)

<sup>10</sup> Sec. 1111(d)

<sup>11</sup> Sec. 1111(h)(1) & Sec. 1111(h)(2)

<sup>12</sup> Sec. 4101

<sup>13</sup> Sec. 8019

supplemental.<sup>14</sup> This is an area of the law that USDE will likely develop regulations for in the coming year.

## CTE Opportunities: Title I

**Standards Alignment:** States **must** demonstrate in their state plans that their “challenging academic standards” are aligned with state CTE standards. Further, states must align these standards to the entrance requirements for credit-bearing coursework for higher education in the state.<sup>15</sup>

**Well-rounded Education:** A main point of emphasis in ESSA is ensuring that every student receives a “Well-rounded Education” (formerly known as core academic subjects). CTE is now included as part of the statutory definition for a “Well-rounded Education”.<sup>16</sup> CTE’s inclusion in this definition will open up new opportunities for states and LEAs to use ESSA funding for CTE programs and activities. However, the extent to which this will be realized is largely up to the discretion of those entities and is also contingent on what portions of the new law the definition is being used.

**State Planning Coordination:** State ESSA plans **must** be developed in coordination with the state’s Carl D. Perkins Act (Perkins) plan and, at the local level, applications must be submitted in coordination with a local Perkins plan, as appropriate.<sup>17</sup>

**Accountability:** ESSA provides states with broad authority for how to develop and implement their new K-12 accountability systems. Five measures are required as noted above but only four are defined in the new law. The fifth accountability metric must be a measure of “school quality or student success”. States are responsible for determining what this metric will be.<sup>18</sup> ESSA provides a few suggestions for states to use such as measures of postsecondary readiness or student access to advanced coursework. However as with most of ESSA, states must ultimately determine what this measure will be, and it must be both objective and allow for meaningful comparisons among schools and districts within a state. It is important to note that with this new flexibility states have a greater ability than before to promote college and career readiness among their students via their accountability systems. As such, this fifth metric should be looked to as a key opportunity during the law’s implementation to embed CTE / career readiness measures within the state’s accountability system. [Read more on these efforts here.](#)

**Dual / Concurrent Enrollment Programs:** For the first time, ESSA provides a formal definition for dual or concurrent enrollment programs as well as for early college high schools.<sup>19</sup> The new law seeks to promote these programs and opportunities for students in a variety of ways including by allowing LEAs

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<sup>14</sup> Sec. 1012

<sup>15</sup> Sec. 1111(b)(1)(D)(i)

<sup>16</sup> Sec. 8002(52). “WELL-ROUNDED EDUCATION.—The term ‘well-rounded education’ means courses, activities, and programming in subjects such as English, reading or language arts, writing, science, technology, engineering, mathematics, foreign languages, civics and government, economics, arts, history, geography, computer science, music, career and technical education, health, physical education, and any other subject, as determined by the State or local educational agency, with the purpose of providing all students access to an enriched curriculum and educational experience.”

<sup>17</sup> Sec. 1111(a)(1)(B) & Sec. 1112(a)(1)(B)

<sup>18</sup> Sec. 1111(c)(4)(B)(v)

<sup>19</sup> Sec. 8002(15) & Sec. 8002(17)



to use Title I funds for these programs and for providing teachers opportunities for joint professional development aimed at integrating academic coursework with CTE.<sup>20</sup>

**Public Report Cards:** ESSA maintains NCLB’s requirement that states and local districts create public report cards that are intended to publish information related to performance on ESSA’s new accountability measures along with other important information such as student participation in and completion of dual or concurrent enrollment programs.<sup>21</sup> States **must** make this available to the wider public in an accurate and timely fashion. Significantly, states **may** elect to include Perkins accountability information on these report cards, along with any other information that they deem important.<sup>22</sup>

**Work-based Learning:** If an LEA deems it appropriate, a local application for Title I funding **may** include a description for how CTE and academic instruction is delivered in a coordinated manner that affords students the opportunity to participate in work-based and experiential learning.<sup>23</sup>

**Effective Student Transitions:** A local application for Title I funding **must** also include language for how an LEA plans to support “effective student transitions” between high school and postsecondary education. In particular, LEAs are now encouraged to describe how they will ensure these student transitions by articulating their coordination efforts with institutions of higher education and employers as well as through other efforts such as career counseling, early college high schools or dual / concurrent enrollment opportunities, as applicable.<sup>24</sup>

## CTE Opportunities: Title II & Teacher Certification Provisions

**Highly-qualified Teacher Requirements:** ESSA fully repeals NCLB’s “highly-qualified teacher” requirement and replaces it with the term “effective” throughout the new law. States are responsible for determining teacher certification and licensure requirements and processes for the state, including “alternative” routes to certification.<sup>25</sup> ESSA amends all other federal laws making use of the highly-qualified teacher terminology.

**Professional Development Opportunities:** ESSA continues to provide states and LEAs with separate funding under Title II to support professional development opportunities and programs for teachers, school leaders and administrators. State education agencies **may** choose to use a portion of these funds to prepare teachers, principals and other school leaders to integrate academic and CTE instructional strategies, which **may** also include training on how to understand and make use of labor market information and ways to ensure effective student transitions to postsecondary education and the workforce.<sup>26</sup>

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<sup>20</sup> Sec. 1114(e)(2)(A)

<sup>21</sup> Sec. 1111(h)(1)(C)(viii)(I)(II)(bb)

<sup>22</sup> Sec. 1111(h)(1)(C)(xiv)

<sup>23</sup> Sec. 1112(b)(12)

<sup>24</sup> Sec. 1112(b)(10)

<sup>25</sup> Sec. 9214

<sup>26</sup> Sec. 2101(c)(4)(B)(xviii)

## CTE Opportunities: Title IV

**State Role in New Block Grant:** ESSA consolidates 49 existing programs into a new block grant, known as “Student Support & Academic Enrichment Grants” available to states via a prescribed formula. Funding for these grants is set to begin in FY 2017 along with all other noncompetitive programs authorized by the law.<sup>27</sup> ESSA contains an authorization level of \$1.605 billion in the first year and \$1.6 billion for each fiscal year thereafter until 2020.<sup>28</sup> These grants are intended to ensure that students receive a “Well-rounded Education,” improve school conditions for student learning and enhance the use of technology to support student achievement.<sup>29</sup> Five percent of the funds allotted to a state for this grant program may be reserved for statewide activities. The allowable uses of funds vary greatly, but states now have the ability to spend this funding on the following activities:

- Technical assistance for LEAs to ensure they are meeting the above purposes of the grant program;<sup>30</sup>
- Coordination and integration efforts with other funding streams and programs that meet the requirements of the grant program (this may include the Perkins Act and other federally funded programs);<sup>31</sup>
- Accelerated learning programs, such as dual or concurrent enrollment programs and early college high schools;<sup>32</sup>
- Reimbursement for low-income students for the costs of their participation in accelerated learning programs;<sup>33</sup>
- Costs of instruction and examination fees for AP and IB programs;<sup>34</sup> and
- CTE programs and activities that meet the requirements of ESSA’s definition for a “Well-rounded Education.”<sup>35\*\*</sup>

\*\* It is important to note that CTE is included in the definition of a “Well-rounded Education”. It is therefore possible to use funds allotted under this section of ESSA for CTE programs at the discretion of the state education agency.

**Local Role in New Block Grant:** The above noted grant program requires that 95 percent of the state’s allocation be disbursed to LEAs for district and school-level activities. Schools and districts within the state that have the greatest need are required to be prioritized under this grant program. Significantly, LEAs must conduct a “needs assessment” prior to grant funding that should examine student opportunities and access to well-rounded educational activities, personalized learning, and school

<sup>27</sup> Sec. 5(b)

<sup>28</sup> Sec. 4112. It is important to note that just like all other authorization levels contained in ESSA, annual funding for these grants is ultimately contingent on Congressional appropriators allocating funding for this portion of the law.

<sup>29</sup> Sec. 4101

<sup>30</sup> Sec. 4104(b)(1). It is important to bear in mind that this block grant seeks to ensure that students are receiving a “well-rounded education” which now includes CTE. It is therefore possible to interpret the purpose of this block grant, at least in part, to extend to CTE-related activities and efforts.

<sup>31</sup> Sec. 4104(b)(2)

<sup>32</sup> Sec. 4104(b)(3)(A)(i)(IV)(aa)

<sup>33</sup> Sec. 4104(b)(3)(A)(ii)

<sup>34</sup> Sec. 4104(b)(3)(A)(i)(IV)(bb)

<sup>35</sup> Sec. 4104(b)(3)(A)(i)(VII)

conditions.<sup>36</sup> The allowable uses of funds at the local level are much more comprehensive and include, but are not limited to:

- Supporting partnerships with postsecondary institutions, employers, and other entities with a “record of success” in implementing activities supported by this grant;<sup>37</sup>
- College and career counseling, guidance, and exploration activities, including training guidance counselors to effectively use labor market information to provide college and career planning;<sup>38</sup>
- Supporting the improvement of STEM instruction and student engagement in STEM subjects, as well as supporting the development of schools specializing in these subjects;<sup>39</sup>
- Supporting accelerated learning programs noted above, increasing the availability of these programs, reimbursing low-income students for the costs of these programs, and increasing student enrollment in accelerated learning programs;<sup>40</sup>
- Strengthening the technological capacity and infrastructure of schools;<sup>41</sup>
- Personalizing the student learning experience using technology and also supporting blended learning experiences for both students and teachers;<sup>42</sup>
- Increasing access for rural, remote and underserved areas to use digital learning resources;<sup>43</sup>
- CTE programs and activities that meet the requirements of ESSA’s definition for a “Well-rounded Education”.<sup>44</sup> \*\*

\*\* It is important to note that CTE is included in the definition of a “Well-rounded Education”. It is therefore possible to use funds allotted under this section of ESSA for CTE programs at the discretion of the local education agency.

**21<sup>st</sup> Century Community Learning Centers:** One of the few individual programs that will remain under ESSA, 21<sup>st</sup> Century Community Learning Centers are another funding stream available to states and local school districts to supplement the K-12 experience during non-school hours. At the state and local levels, these centers are required to fund a multitude of programs and activities that relate to a “Well-rounded Education,” including CTE.<sup>45</sup> Importantly, LEAs are encouraged to fund programs that partner with “in-demand fields of the workforce” as defined by the Workforce Innovation and Opportunity Act or that build “career competencies” such as programs funded by the Perkins Act.<sup>46</sup>

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<sup>36</sup> Sec. 4106(d)

<sup>37</sup> Sec. 4107(a)(2)

<sup>38</sup> Sec. 4107(a)(3)(A)

<sup>39</sup> Sec. 4107(a)(3)(C)

<sup>40</sup> Sec. 4107(a)(3)(D)

<sup>41</sup> Sec. 4109(a)(2)

<sup>42</sup> Sec. 4109(a)(1) & (3)

<sup>43</sup> Sec. 4109(a)(6)

<sup>44</sup> Sec. 4107(a)(3)(J)

<sup>45</sup> Sec. 4201(a)(2)

<sup>46</sup> Sec. 4205(a)(14)

## Conforming Amendments to Perkins

*The Every Student Succeeds Act contains several “conforming amendments” that have altered the Carl D. Perkins Career and Technical Education Act (Perkins) in a few ways. Below is a highlighted, but not exhaustive, list of these changes to current Perkins law. Portions of current Perkins law that are no longer funded or have never been funded, such as Title II or Sec. 118 of the Perkins Act, are not listed here.*

**Perkins Accountability:** Secondary Perkins accountability indicators 1S1, 1S2 and 4S1 will all now be calculated using ESSA’s new or changed methods for assessing student academic achievement and calculating cohort graduation rates.<sup>47</sup> The USDE’s Office of Career, Technical, and Adult Education (OCTAE) will likely release updated guidance for states to reflect these changes.

**State Perkins Plans:** With ESSA’s emphasis on a “Well-rounded Education”, NCLB’s “core academic subjects” terminology has been dropped in favor of this new definition. As mentioned above, ESSA defines this new term to include CTE and as such states’ Perkins plans must now include a description for how this concept will be supported.<sup>48</sup> ESSA also makes changes to current state Perkins plan requirements related to state-identified standards, updating Perkins to align with ESSA’s new terminology related to “challenging state academic standards” as defined by that law.<sup>49</sup> OCTAE will likely release updated guidance to states to reflect these changes.

**Perkins State Leadership:** ESSA makes a small modification to Perkins’ current required uses of funds for state leadership activities funding. As mentioned above, ESSA updates Perkins to clarify that states may now use a portion of their Perkins allocation designated for this purpose to ensure students are receiving a “Well-rounded Education”.<sup>50</sup> OCTAE will likely release updated guidance to states to reflect these changes.

**Local Perkins Plans and Uses of Funds:** ESSA makes similar changes to Sections 134 (Local Perkins Plans) and 135 (Local Uses of Funds) to update those sections to align to ESSA’s new terminology related to standards and to a well-rounded education.<sup>51</sup>

## Additional Implementation Resources

- [USDE ESSA Resource Page](#)
- [Advance CTE Updates on ESSA Implementation](#)

*For more information on this resource, please contact Steve Voytek, Advance CTE’s Government Relations Manager ([svoytek@careertech.org](mailto:svoytek@careertech.org)).*

<sup>47</sup> Sec. 9215(n)(3) & Perkins Sec. 113(b)

<sup>48</sup> Sec. 9215(n)(6)(B) & Perkins Sec. 122(c)(7)(A)(i)

<sup>49</sup> Sec. 9215(n)(6)(A) Perkins Sec. 122(c)(1)(I)(i)

<sup>50</sup> Sec. 9215(n)(7) & Perkins Sec. 124(b)(4)(A)

<sup>51</sup> Sec. 9215(n)(8), Sec. 9215(n)(9) & Perkins Sec. 134(b)(3), Sec. 135(b)(1)(A), respectively.

# MEANDERING TOWARD GRADUATION: TRANSCRIPT OUTCOMES OF HIGH SCHOOL GRADUATES



The Education Trust

## TO THE POINT

- ▶ Despite the rhetoric around college and career readiness for *all* students, just 8 percent of high school graduates complete a full college- and career-preparatory curriculum.
- ▶ Nearly half of graduates complete neither a college- nor career-ready course sequence. Rather than aligning high school coursework with students' future goals, high schools are prioritizing credit accrual, which treats high school graduation as the end goal.
- ▶ College and career readiness is still a new expectation that will require significant change to school structures, culture, and instruction to prepare students for postsecondary study aligned with their interests. We highlight school- and district-based levers for practitioners to consider in order to maximize postsecondary readiness among students.

Over and over again, educators and policymakers alike mouth the mantra: ALL kids ready for college and careers. But there remains a giant gulf between that rhetoric and the reality of today's high school graduates. Among recent graduates, fewer than 1 in 10 have taken a foundational set of courses they'd need to be both college- and career-ready. And almost half completed neither a college-prep nor a career-prep course sequence.

# MEANDERING TOWARD GRADUATION: TRANSCRIPT OUTCOMES OF HIGH SCHOOL GRADUATES

BY MARNI BROMBERG AND CHRISTINA THEOKAS

As a high school student in Louisiana, Tre decided he wanted a career in dentistry.<sup>1</sup> His counselor said his best option was to pursue fewer academic credits in exchange for more elective credits toward the health field he was interested in, so he did exactly that. But once Tre graduated and got to community college, he wasn't so sure it was the best advice. There, he learned that he hadn't placed on the college level in any subject, and his college counselor questioned why he hadn't taken more science classes. Tre lasted less than a year taking remedial courses before he dropped out.

Alarmed by the plight of American high school graduates who end up like Tre — with a high school diploma, but no path forward to achieve long-term goals — policymakers and educators have been working for years to solve this longstanding problem. In the policy arena, states have increased course requirements for graduation, instituted high school exit exams, and, most recently, adopted new college- and career-ready standards — all with the intention to advance achievement and open up more opportunities for low-income students and students of color, many of whom have historically graduated with inferior credentials. On the ground, school and district leaders have experimented with their own strategies — including smaller schools, career academies, and whole-school reform models (e.g., early colleges) — each aimed at better preparing and connecting students to the vast array of postsecondary opportunities available to them.

For both educators and policymakers, the aspiration is to prepare students for college *and* career, because it is now clear that college and career are no longer two distinct pathways. Most students will need to earn a postsecondary credential in order to achieve a family-sustaining wage in today's economy.<sup>2</sup>

However, given unequal preparation at the outset of high school and the differing demands of different postsecondary settings, achieving this aspiration is not without its challenges. True, graduation rates have reached an all-time high and postsecondary enrollment rates are steadily rising.<sup>3</sup> But, like Tre, thousands of those new college students are testing into remedial reading, writing, or math courses because they don't have the foundation to perform at the levels demanded in college classes.<sup>4</sup> Employers, too, report that high school graduates don't have the basic foundational skills to start in entry-level positions.<sup>5</sup>

What's going on here? Are students being exposed to the foundational content that would prepare them to achieve their postsecondary goals? Are they being afforded

experiences that groom them to problem solve, study effectively, and work productively in teams?

To get better answers to these questions, we dug into the most recent national database of high school transcripts to find out what it could tell us about the experiences and preparation of our nation's graduates. How many of our young people are completing a full college- and career-prep curriculum? How many also have grades that show evidence of mastery? And how do those patterns differ by race and socioeconomic status as well as students' own aspirations?

To be sure, course-taking and grades can only tell us so much about genuine readiness for success in college and careers. Indeed, research suggests that students need some combination of:

- **Foundational academic content knowledge;**
- **Cognitive strategies**, such as collecting information and identifying and solving problems;
- **Learning skills and dispositions**, such as goal-setting, persistence, time management, and study skills; and,
- **Specialized content knowledge** applicable to their intended path after graduation. Indeed, readiness for a postsecondary nursing program requires different knowledge than does a pre-law program.<sup>6</sup>

Future Education Trust analyses will attempt to bring some data to bear on other components of readiness. In the meantime, though, we believe the data on both college and career course-taking, as well as the grades earned in those classes, can serve as a valuable foundation for understanding the trends in postsecondary readiness.

The data suggest that students are meandering toward graduation. Rather than ensuring students have access to a cohesive curriculum that aligns high school coursework and students' future goals, high schools are prioritizing credit accrual, which treats graduation as the end goal. These data call attention to how far we have yet to travel to assure that all of our students — and most especially students from disadvantaged backgrounds and students of color — are fully prepared to take advantage of the full range of opportunities that await them after high school. Instead of being prepared for college *and* career, many of our students turn out to have been prepared for neither.

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## What Comprises a College-Ready Curriculum?

Subject	Credits	Specific Courses
 English	4	N/A
 Math	3	Algebra II
 Science	3	Biology and Chemistry or Physics
 Social Studies	3	U.S. or World History
 Foreign Language	2	Same Language Study

## What Comprises a Career-Ready Curriculum?

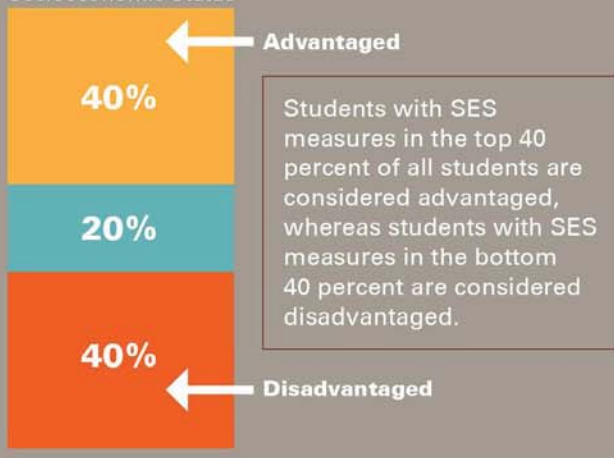
Subject	Credits	Specific Courses
 Career Technical Education	3	In the Same Field

## How Do We Measure "Advantage?"

**Advantage** refers to a student's socioeconomic status (SES), which is a measure of family income, parental occupational status, and parental education.



Socioeconomic Status



## OUR ANALYSIS

To help us make sense of course-taking patterns, we examined transcript data from the High School Longitudinal Study, which follows a nationally representative group of ninth-graders from 2009 through 2013, the fall after their expected graduation.<sup>7</sup> We group high school graduates into the following categories based on the curriculum they've completed:

- **College-Prep Curriculum:** Consists of four credits in English; three credits in math, including algebra II; three credits in social studies, including U.S. history or world history; three credits in science, including biology and either chemistry or physics; and two credits in the same foreign language. (See sidebar.)<sup>8</sup> This definition is aligned with the entry requirements at many public colleges but does not indicate exposure to all of the experiences and knowledge a student might need to be ready for college.<sup>9</sup>
- **Career-Prep Curriculum:** Consists of three or more credits in a broad career field such as health science or business. (See sidebar for a full list of career fields.)<sup>10</sup> This definition assumes a concentration in high school will provide the foundation for a student to pursue postsecondary study in a career field but does not signal immediate readiness for a career after graduation.
- **College- and Career-Prep Curriculum:** Consists of both college-ready and career-ready course-taking sequences.
- **No Cohesive Curriculum:** Consists of neither the college-ready nor the career-ready sequence.

Certainly, we know course completion is an imperfect measure of readiness. Courses vary in expectations and quality, and credit accrual does not signal mastery. To address these problems, we have also examined grades earned in academic and career coursework as a proxy measure of whether learning has occurred. We recognize that grades are also a reflection of course expectations and student behaviors, but research has shown grade point averages (GPAs) to be predictive of college success — far more, actually, than test performance.<sup>11</sup>

We compare these data based on race and socioeconomic status. SES is a measure of relative advantage that accounts for multiple background characteristics, including family income, parental education, and parental occupations. When we refer to low-SES (or disadvantaged) students, we mean students in the bottom 40 percent of the SES distribution, and when we refer to high-SES (or advantaged) students, we mean those in the top 40 percent of the SES distribution.

Together, data on courses and grades can broaden our current understanding of who is college- and/or career-ready and which additional indicators we need to truly gauge readiness. Moreover, school and district leaders can repeat this analysis with their own data to better understand which of their students are prepared for postsecondary opportunities.



## Which Careers Can Students Study in High School?

Career Field Category	16 Career Clusters
1. <b>Agricultural and Natural Resources</b>	Agriculture, Food, and Natural Resources
2. <b>Business and Marketing</b>	Business and Administration Finance Retail/Wholesale Sales and Services
3. <b>Communications and Design</b>	Arts, Audio-Video Technology, and Communications
4. <b>Computer and Information Sciences, Engineering</b>	Information Technology Scientific Research and Engineering
5. <b>Trades</b>	Architecture and Construction Manufacturing Transportation, Distribution, and Logistics
6. <b>Consumer and Culinary Services</b>	Human Services Hospitality and Tourism
7. <b>Health Sciences</b>	Health Sciences
8. <b>Public Services</b>	Education and Training Government and Public Administration Law, Public Safety, Corrections, and Security

These career categories are loosely aligned to the 16 career clusters that were designed by the Office of Career, Technical, and Adult Education at the U.S. Department of Education and sponsored by Advance CTE.

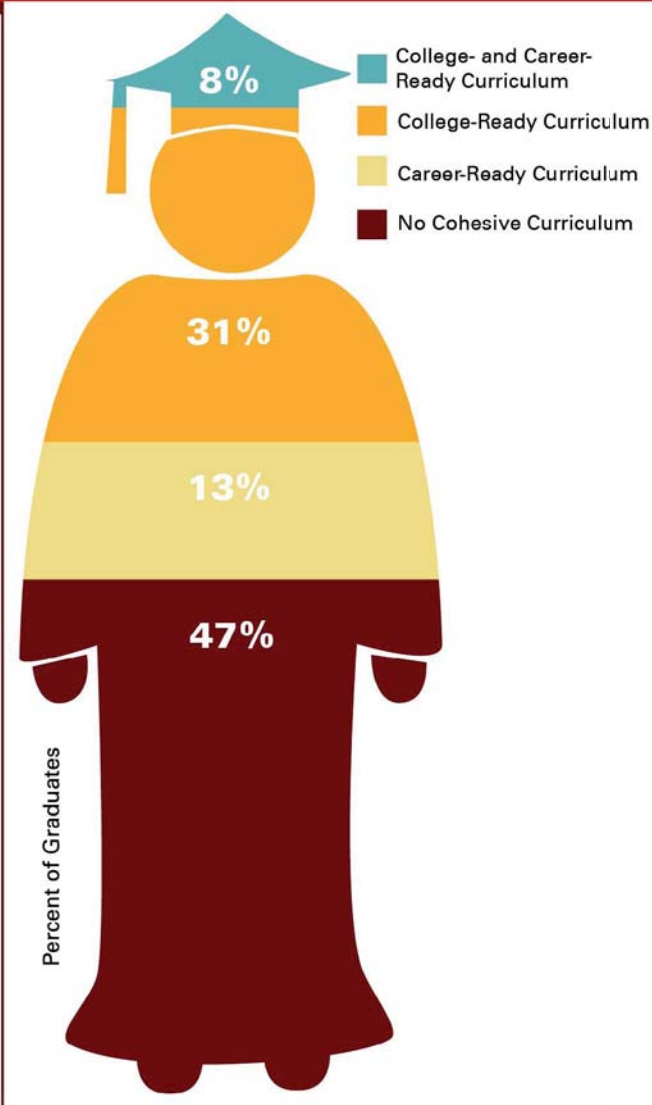
## WHO COMPLETED WHICH COURSES?<sup>12</sup>

**Only 8 percent of graduates completed a full college- and career-prep curriculum.**

Despite the rhetorical commitment to college and career readiness for all students, only a small fraction of 2013 graduates completed both college- and career-preparatory course sequences in high school (*Figure 1*). Rates of college- and career-ready course-taking are consistently low across student groups: Between 7 and 9 percent of white, black, and Latino graduates have taken a college-ready and career-ready sequence of courses (*Figure 2a*).<sup>13</sup>

Some might think that students just can't cram both sets of courses into the typical high school schedule, but the full college- and career-ready sequence consists of only 18 credits; high school students earn, on average, 26 credits before graduation. So for the average student, there is plenty of space for college prep, career prep, and other electives.

**Figure 1: Curriculum Type, 2013 Graduates**



### EDUCATOR IMPLICATIONS

All students will not follow the exact same path through high school, but educators must be aware of how different courses and sequences are going to build the academic foundation and career-ready skills all students need. Students must be set up for success immediately after high school (i.e., to meet eligibility requirements for postsecondary pathways) and later down the line (i.e., to have the requisite knowledge and skills if they want to change paths).

Some schools are already experimenting with methods for expanding college and career opportunities, like giving students credit for mastering college-level work outside of the traditional course structure.

We encourage high schools to examine which of their recent graduates are college- and career-ready. They should then take a critical look at their approach to providing students with foundational knowledge and skills as well as opportunities to pursue individual interests aligned to career goals.

### SCHOOL-BASED LEVERS FOR CHANGE

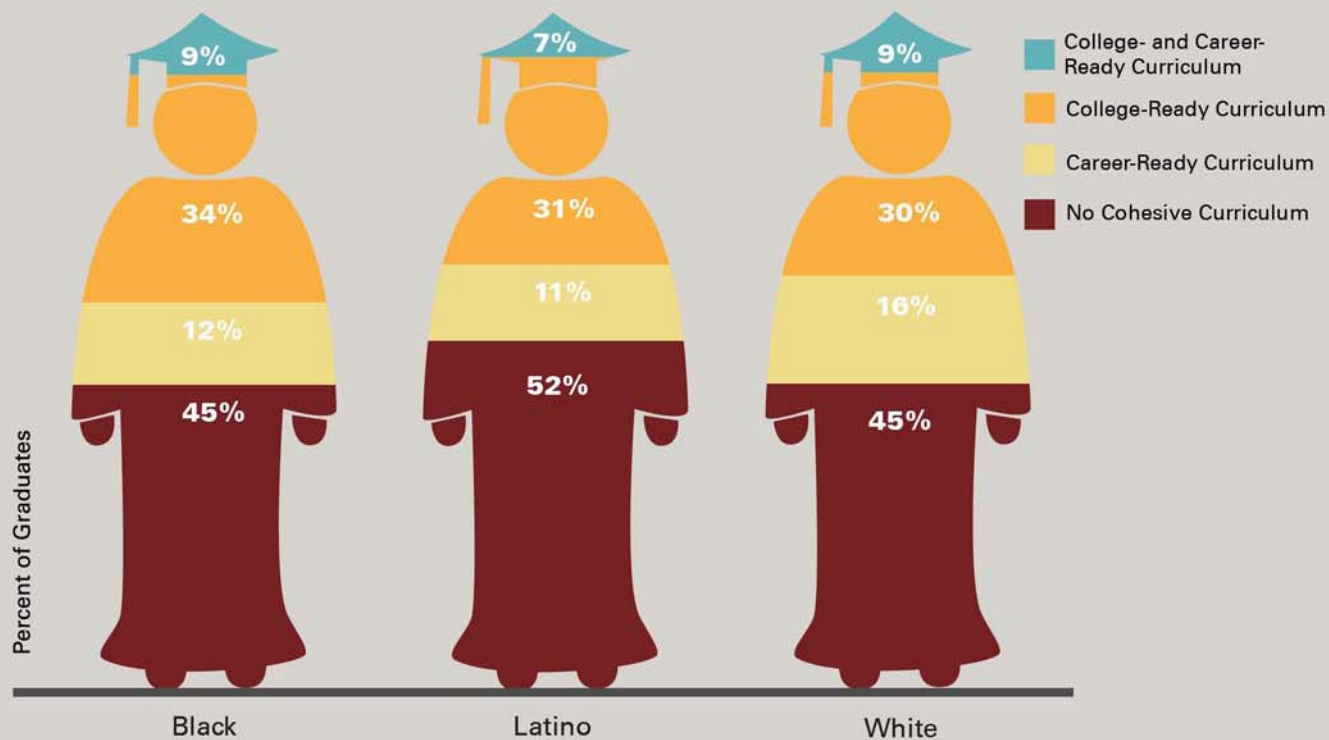
- **Transcript analysis:** Which students can currently access both an academic and career-oriented curriculum?
- **Master schedule:** How are courses and time structured to provide students with the opportunity to gain necessary knowledge and skills and access content that interests them? Does tracking, formal or informal, prevent students from taking both academic and career courses?
- **Credit policies:** Do students have opportunities outside of the traditional course structure to attain knowledge and skills? What is the quality of these opportunities, and how are they recognized on transcripts?
- **Graduation requirements:** What are your state and/or local graduation requirements? Would additional requirements help prepare all students for college and careers?

### Almost a third of graduates only complete a college-ready sequence.

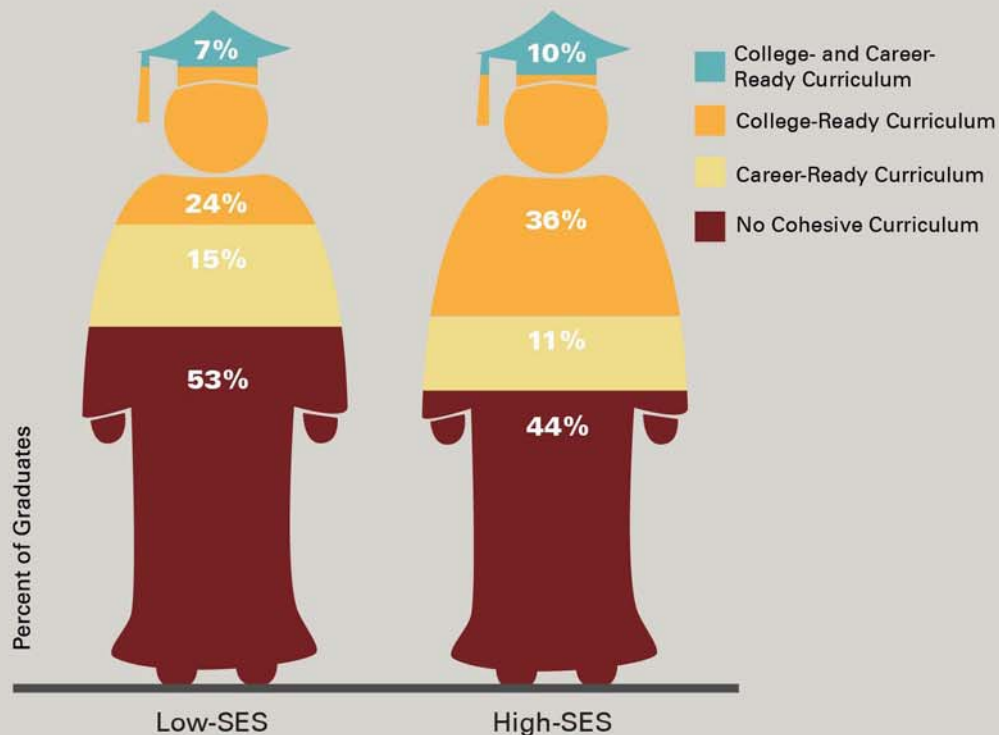
Three in 10 graduates complete only a college-ready sequence, and if we combine this group with those who have completed a college- and career-ready sequence, about 4 in 10 have accessed a college-ready curriculum. Students from disadvantaged backgrounds were 14 percentage points less likely to complete a college-prep or college- and career-prep course sequence than advantaged students, but there were no significant differences between racial/ethnic groups (*Figures 2a and 2b*).<sup>14</sup>

When we examine what is preventing students from completing a college-ready curriculum, we find that 57 percent of students who did not take a college-ready curriculum are missing *more than one* requirement — with the remaining 43 percent missing only one.

**Figure 2a: College- and Career-Ready Course-Taking, by Race (2013)**



**Figure 2b: College- and Career-Ready Course-Taking, by Socioeconomic Status (2013)**



Among students who missed only one requirement, math and foreign language were the greatest barriers. About a third of these students missed the math requirement, not because they did not take enough math credits, but because they did not specifically take an algebra II credit.<sup>15</sup> Algebra II is a course that's particularly related to enrollment and success in college.<sup>16</sup> Our data show students often get locked into a math trajectory based on their incoming math placement: Only 41 percent of students who took pre-algebra or lower as ninth-grade students eventually took an algebra II credit.<sup>17</sup> By contrast, 70 percent of students who started out in algebra I and 75 percent of students who started out in geometry eventually reached at least algebra II.

The other major barrier to taking a college-ready curriculum was foreign language: 31 percent of those who missed only one requirement did not take two foreign language credits.<sup>18</sup>

Science was the third most prevalent bottleneck among students who missed only one requirement within the college-ready curriculum. While only 3 percent didn't take three science credits, 16 percent didn't take the combination of biology and chemistry or physics — despite that these are foundational science courses necessary for many postsecondary pathways.

What's more, among students who missed more than one requirement, science was the leading barrier: 81 percent of this group either didn't take enough science credits or didn't take the specific science courses needed to fulfill the college-ready curriculum.

### EDUCATOR IMPLICATIONS

Many states don't require students to take the courses that determine eligibility to attend public colleges, which could be contributing to the trends in college-ready course-taking. Foreign language is a good example: It's required by most public colleges, yet most state policies don't require it for graduation.<sup>19</sup> State graduation requirements also vary from two to four science credits, often without specifying content or laboratory status.<sup>20</sup> High school counselors should ensure that students understand the requirements not only for graduation, but also for entry into different postsecondary settings that are aligned with students' goals. Schools can't let students get caught in the gap between qualifying for graduation and falling short of postsecondary preparedness.

Even when coursework is required, the data suggest that many students are not progressing along the math pipeline and don't ultimately reach advanced levels. Attending to the courses students take is important in all subject areas, not just math. For students to master disciplinary content and gain deeper levels of understanding, instruction needs to go deeper, year by year, giving students the opportunity to build on previous knowledge and extend it to new topics, questions, and challenges. And depending on the path after graduation, certain courses may be requirements for entry. For example, students enrolling in a community college nursing program need multiple advanced math and science courses.

### SCHOOL-BASED LEVERS FOR CHANGE

- **Graduation requirements:** Even if your state or district graduation requirements don't align with those in state colleges, does the school ensure all students take a curriculum that would qualify them for entry?
- **Postsecondary planning:** How do counselors and teachers engage students in planning for postsecondary school or training? Do students have plans to help them align their coursework and experiences in school to their future goals?

### Just over 1 in 10 graduates complete a career curriculum, but not a college curriculum.

Thirteen percent of graduates completed a three-course career sequence, but not the college-ready course requirements — making this pathway only slightly more common than the college- and career-ready sequence. It is not highly pursued among any group of students, although disadvantaged and white graduates are slightly more likely than advantaged and graduates of color to complete it (*Figures 1, 2a, and 2b*). Among students who take a career curriculum, the most common career fields are computers and engineering (22 percent) and the trades (21 percent), which include fields like construction, architecture, or manufacturing.

On average, career-but-not-college-ready students took almost seven career technical education (CTE) credits, suggesting they were investing more time than the basic curricular definition. But those courses may have been completed at some expense to academic coursework. While the majority of these students met college-ready requirements in English and social studies, 43 percent missed the math requirement, 54 percent missed the science requirement, and 66 percent fell short in foreign language. Depending on the career path that students are interested in, missing math and science courses could be a serious problem.

One major barrier to achieving career readiness for more students is the number who take disjointed CTE courses. Of students who did not complete a career-ready curriculum, 26 percent completed enough CTE credits to earn a career-ready designation, but those credits were across different career fields.<sup>21</sup> Our definition of career fields is quite broad to begin with, meaning non-completers likely took courses in very unrelated fields.

### EDUCATOR IMPLICATIONS

High schools should not curtail career exploration, as it is developmentally appropriate, but staff should think strategically about how to help students link academic and career courses to their postsecondary goals. It is especially important for students to learn about the broad array of careers and not only choose

something that seems interesting, but will foreclose other opportunities later on. Students living in impoverished or rural areas may not know about the variety of careers to choose from and if they do, what is necessary to get there. Many students are also unaware of the academic prerequisites for many postsecondary career pathways. Schools should also be clear about options, choices, and consequences so students don't end up like Tre — thinking they are taking the classes they will need for their postsecondary plans, when, in fact, those classes are not sufficient.

### SCHOOL-BASED LEVERS FOR CHANGE

- **Postsecondary career pathways:** Has your state or district articulated the requirements for entry into various postsecondary training pathways, and how do your school's offerings and guidance align?
- **Academic and CTE integration:** Are CTE teachers expected to integrate academic content, and are academic teachers expected to integrate applied career content? If so, do teachers have the training and capacity to do this well?

### Nearly half of graduates do not complete a college- or a career-ready course sequence.

Forty-seven percent of graduates did not complete any cohesive curriculum, making this the most common pathway of all (Figure 1). This pattern is far too common for all groups of students and is particularly problematic among Latino graduates and graduates from disadvantaged families (Figures 2a and 2b). Compared with 45 percent of white and black graduates, 52 percent of Latino graduates didn't take a cohesive curriculum. Similarly, 44 percent of students from more advantaged families didn't take a cohesive curriculum, compared with 53 percent of students from disadvantaged families.

These students are high school *graduates* — meaning they are technically completers, but did not take a cohesive curriculum that culminated in a direction for postsecondary study. On average, they completed 25 credits — fewer credits than graduates in other curriculum groups but still well over the 18 necessary for the college- and career-ready curriculum.

High rates of course failure represent a key contributor to this problem: Overall, the graduating class lost roughly 3.4 million credits to course failures and withdrawals. This represents only those credits lost by those who graduated, not the countless lost among those who dropped out.

But, these lost credits were heavily concentrated among those who did not complete a cohesive curriculum: More than half (54 percent) of these students failed or withdrew from at least one course in high school, compared with only 21 percent of graduates who completed a college- and career-ready curriculum (Figure 3). What's more, nearly 1 in 4 students

who did not complete a cohesive curriculum lost *more than* two credits to course failures and withdrawals, compared with just 1 in 50 students who completed a college-and-career-ready curriculum. Students who complete a career-ready course sequence are only slightly less likely to have failed a course as those who did not complete a cohesive curriculum, suggesting this pattern spans a few curricular pathways.

### EDUCATOR IMPLICATIONS

Instead of cohesive learning experiences that prepare students for next steps, the data suggest that high schools are prioritizing credit accrual.

Student preparation, interests, and opportunity structures in high schools don't always align naturally, meaning there are no easy solutions. A custom program of study for each student is not realistic (or necessary), nor is training students for a specific job upon graduation. Rather, the challenge is finding ways to provide students with foundational academic content and learning skills while nurturing their interests and more personalized goals.

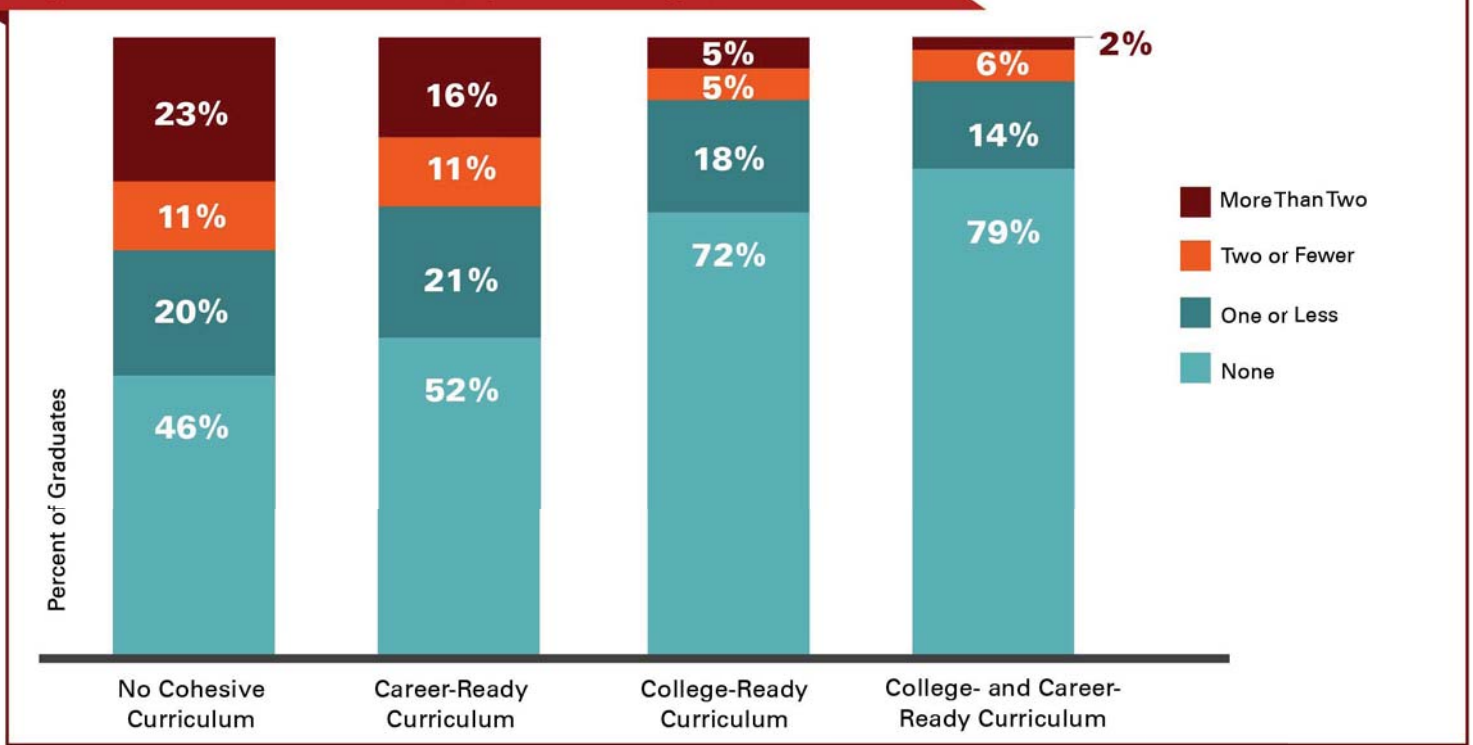
High rates of course failure are a key contributor to this problem. Failure is a well-documented norm in high schools and not only has consequences for course completion and learning, but also student self-perception, efficacy, and motivation.<sup>22</sup> A common response is the development of credit recovery programs, which focus on ensuring students get the credits they need for graduation. But these programs need to be developed in ways that lead to mastery and ensure students have opportunities to reach their learning goals, rather than just accumulate credits.

Alternatively, high schools can develop preventative approaches to course failure by monitoring student performance in real time and providing the instructional and cultural supports that enhance course mastery.<sup>23</sup> Efforts to accelerate learning in middle school and early high school can also help avert some of these patterns. Without these shifts in intervention, schools are likely to see rates of failure increase as schools transition to more rigorous college- and career-ready standards — a level not previously expected of many students.

### SCHOOL-BASED LEVERS FOR CHANGE

- **Course guidance:** When adults provide guidance to students around course-taking, does it situate credit accrual and graduation as the only goals?
- **Transcript analysis:** Are high rates of course failure preventing students from achieving readiness for next steps? If so, are course failures clustered in certain grades, subjects, or courses? And do opportunities to recover credits allow students to progress to more rigorous coursework later on?
- **Acceleration culture:** Do students have opportunities early on to accelerate their learning and prevent course-failures from occurring?

Figure 3: Failures and Withdrawals, by Curriculum Type, 2013 Graduates



Note: The graph shows number of lost credits, not lost courses, due to failures. Credits were counted as failures if students' transcripts indicated that they received 0 credits for a course AND received a grade D or lower, not passing, or unsatisfactory.

**Mastery gaps are widest among graduates who have completed a college-ready curriculum: 82 percent of white graduates received a 2.5 GPA or higher in their academic courses, compared with 51 percent of black graduates and 63 percent of Latino graduates.**

### WHO DEMONSTRATES MASTERY?

**About 1 in 7 graduates complete a cohesive curriculum but do not demonstrate mastery of that curriculum.**

Seat time itself is not sufficient to signify readiness for postsecondary learning opportunities. So to further understand who is college- and/or career-ready, we introduce a minimum GPA of 2.5 (roughly a B- average) in academic and career coursework as an additional indicator of readiness and then reassess how many students are college- and/or career-ready.<sup>24</sup> So, for example, we have considered students to be college-ready if they have completed a college-ready curriculum *and* have a 2.5 GPA or higher in their academic

courses, and career-ready if they have completed a career-ready curriculum *and* earned a 2.5 GPA in their career coursework.

When we add this GPA mastery benchmark as an additional requirement, 14 percent of all graduates would no longer be considered college- or career-ready (*Figure 4*) — joining the 47 percent of students who never took the college- or career-ready courses in the first place.

Graduating with demonstrated mastery is considerably less common among students of color and disadvantaged students. For example, among students who completed a career-ready curriculum, 85 percent of white students

earned a 2.5 GPA or higher in their career courses, compared with only 72 percent of black students and 76 percent of Latino students. Similarly, 87 percent of more advantaged students who took a career-ready sequence met this mastery benchmark, compared with 75 percent of students from disadvantaged backgrounds (*Figure 5a*).

Mastery gaps are widest among graduates who have completed a college-ready curriculum: 82 percent of white graduates received a 2.5 GPA or higher in their academic courses, compared with 51 percent of black graduates and 63 percent of Latino graduates (*Figure 5b*). Among more advantaged graduates who completed a college-ready curriculum, 80 percent received a 2.5 GPA, whereas 64 percent of disadvantaged graduates met this benchmark.

### EDUCATOR IMPLICATIONS

Course grades capture a complex mix of performance metrics and behaviors, many of which are not totally transparent from a GPA alone. Student effort certainly plays a role, as do teacher policies

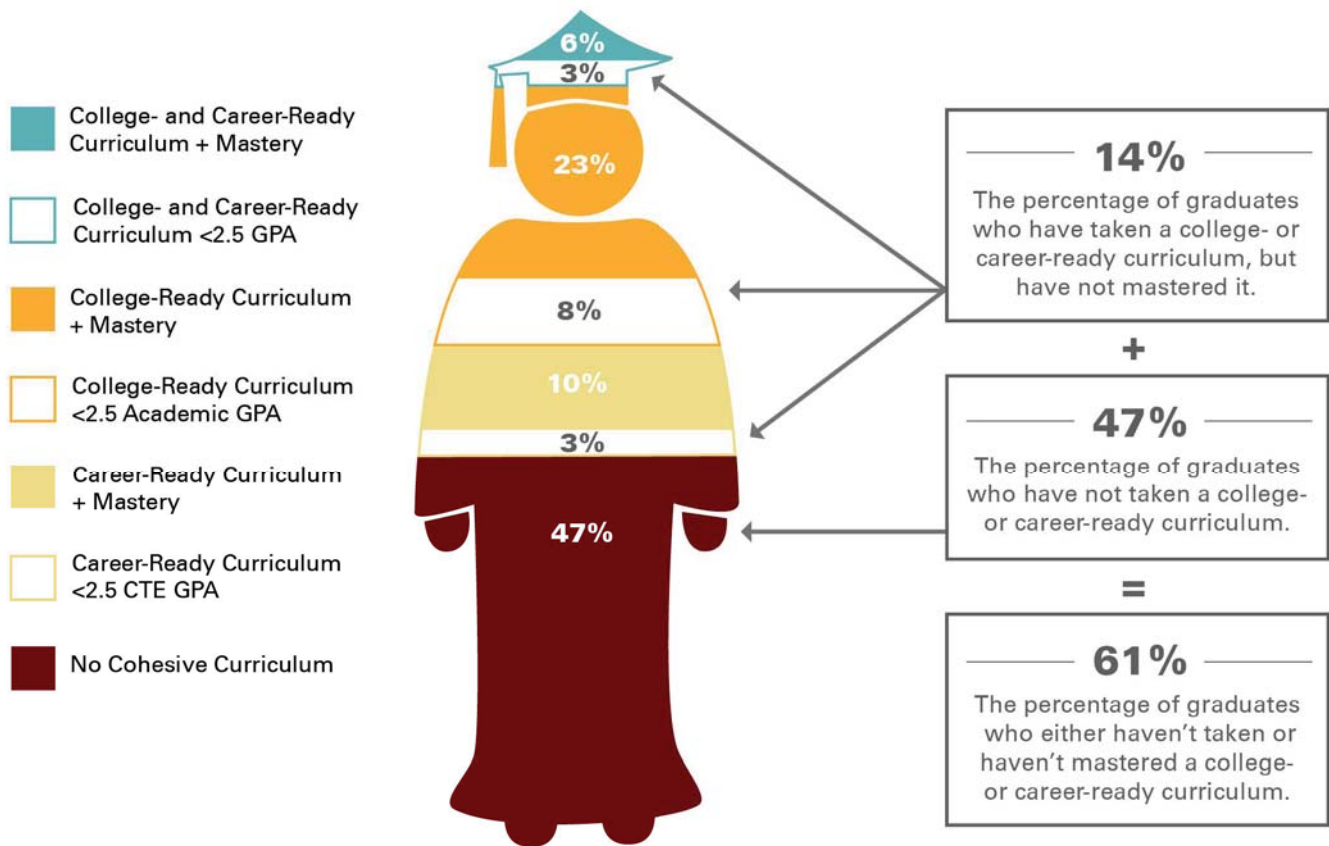
and practices. Ultimately though, grades represent demonstrated mastery, which is determined by how educators instruct, support, and engage their students.

GPA gaps within curriculum categories suggest that students aren't being afforded equitable preparation, instruction, or support to master material in their courses. It seems seat time and scheduling have been the emphasis, rather than quality of coursework, to ensure that instruction and support are leading to content mastery. Yet mastery, not seat time, is what sets graduates up for success in postsecondary settings.

### SCHOOL-BASED LEVERS FOR CHANGE

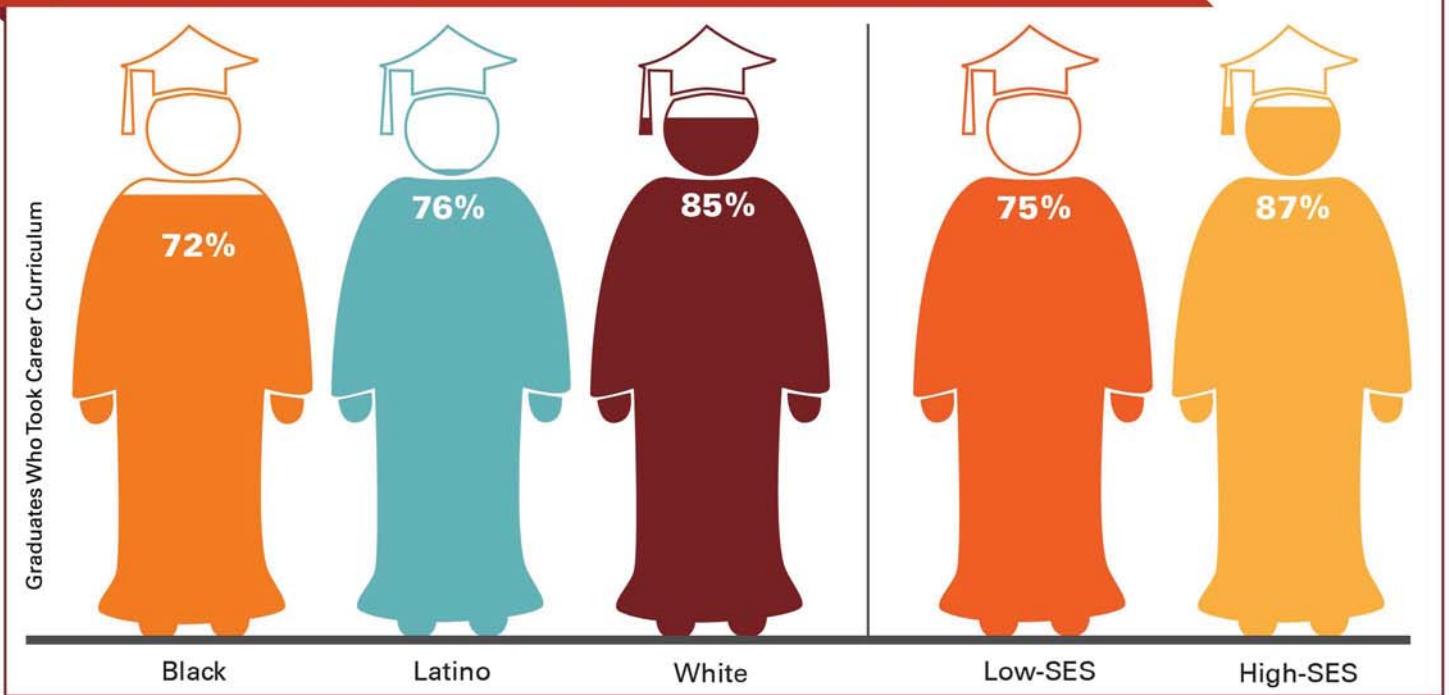
- **Grading policy:** Does your school have a uniform grading policy? Is this monitored to assure consistency across teachers and subjects? What is your school's policy on course failure?
- **Educator development:** Are teachers supported to provide rigorous and engaging instruction regardless of content area?

**Figure 4: Curriculum Type and Mastery, 2013 Graduates**



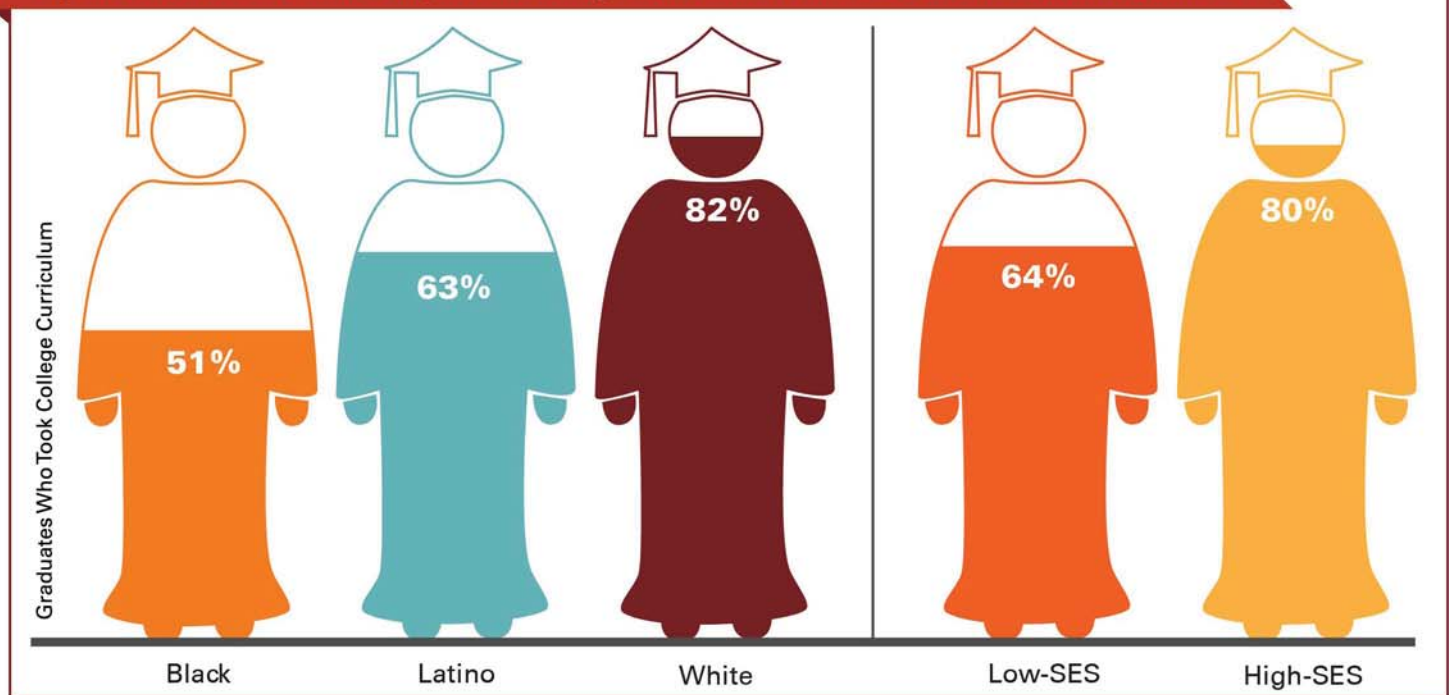
**Note:** Mastery in the career curriculum is defined here as receiving a 2.5 GPA or higher in all CTE courses. Mastery in the college-ready curriculum is defined here as receiving a 2.5 GPA or higher in all academic courses. Mastery in the college- and career-curriculum is defined here as meeting both GPA benchmarks. The percentages in the college- and career-ready curriculum categories do not sum to the total percent of students completing this curriculum (8 percent) because of rounding.

**Figure 5a: Graduates Who Completed a Career Curriculum With a 2.5 GPA in CTE Courses**



Note: This graph includes both students who completed only a career-ready curriculum and students who completed a college-and-career curriculum.

**Figure 5b: Graduates Who Completed a College Curriculum With a 2.5 GPA in Academic Courses**



Note: This graph includes both students who completed only a college-ready curriculum and students who completed a college-and-career curriculum.



## WHAT ABOUT STUDENT ASPIRATIONS?

The majority of students aspire to a college degree, despite different curriculum experiences.

The fact that only half of graduates take a cohesive college-or-career curriculum — and fewer still master one — could represent genuine indecisiveness among students around postsecondary planning. But data about students' postsecondary aspirations suggest just the opposite: The vast majority of graduates expect to earn a postsecondary degree. This is true even among students who have not accessed a cohesive high school curriculum.

About 6 in 10 graduates who do not take a cohesive curriculum while in high school expect to at least earn a bachelor's degree, and an additional 2 in 10 expect to pursue either a postsecondary certificate or an associate degree (Figure 6). Together, this is only slightly fewer than the 9 in 10 graduates who take a college-ready curriculum expecting to earn some postsecondary degree. What's more, students report these expectations at the end of their junior year, suggesting that their schools have — either explicitly or indirectly — communicated that their diploma will signify preparation for college enrollment, even if the information on their transcripts suggests otherwise.<sup>25</sup>

On the other hand, course-taking patterns do seem to signal a bit of intentionality, at least for a small group of graduates. For example, graduates who take a career-ready course of study are more likely than graduates in other groups to say they expect to pursue a certificate or an associate degree, suggesting that part of this group may plan to enroll in a program aligned with their prior studies and interests. The question is whether they

are prepared with the foundational academic skills that are typically required in such programs.

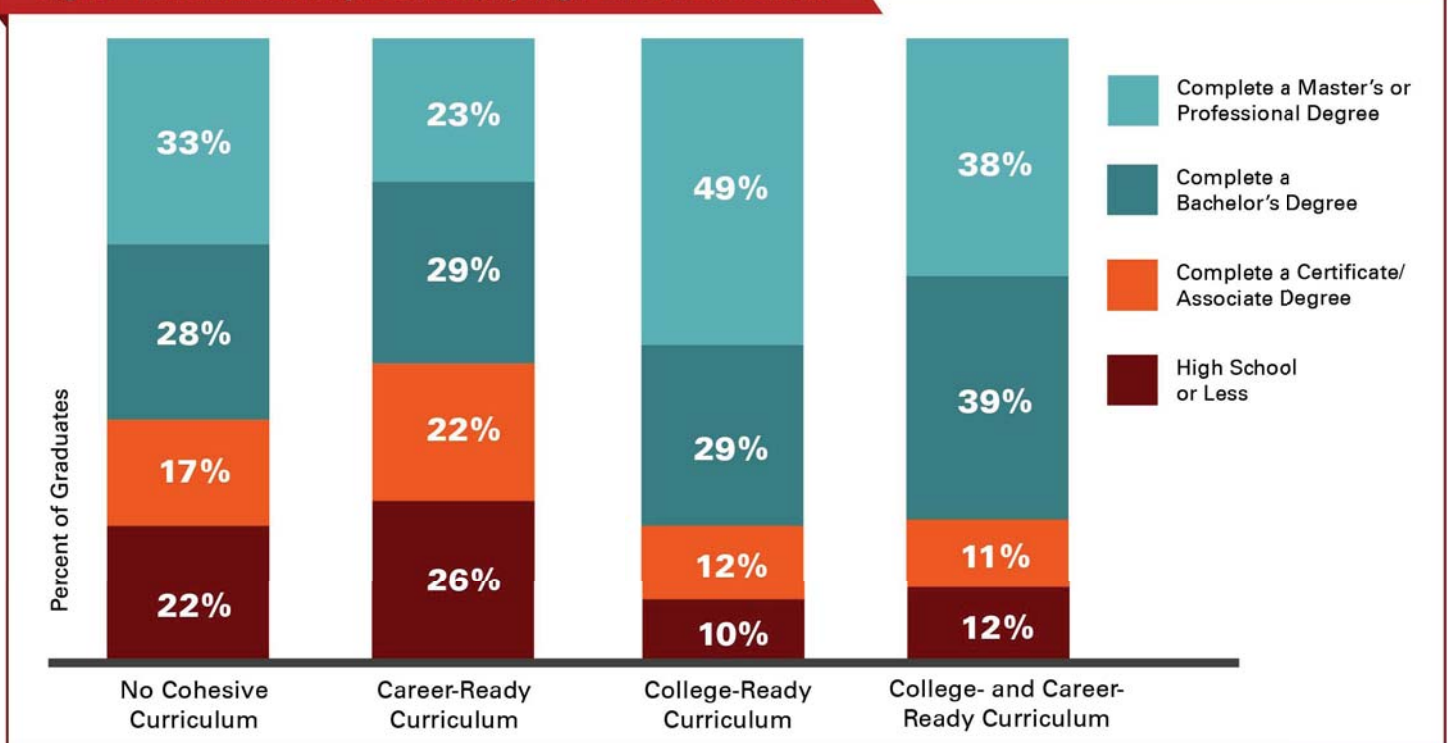
### EDUCATOR IMPLICATIONS

High school graduates view postsecondary education as their best option. Helping students to connect their courses and learning with what they want to do after high school is an essential step in achieving true readiness. Students need to know what they must achieve (e.g., grades, courses, experiences) for various options after high school. Educators should support students' aspirations, but they should also be clear with students about the foundational knowledge, skills, and dispositions that are necessary for all postsecondary pathways. When students experience high expectations, receive support to reach their goals, become active partners in decisions, and see their learning as important and applicable, they are apt to be more motivated and engaged.

### School-Based Levers for Change

- **Postsecondary alignment:** Do guidance counselors know and understand the entry requirements for a diverse set of postsecondary pathways? Do teachers know and understand them for their content areas? Beyond the entrance requirements, do they know what is necessary to be placed into credit-bearing courses?
- **Graduation expectations:** Are students encouraged to take a foundational academic curriculum regardless of their postsecondary aspirations? What, if any, parameters exist for students to deviate from a college-ready curriculum?

Figure 6: Educational Expectations, by High School Curriculum



## COLLEGE AND CAREER READINESS: STILL MORE RHETORIC THAN REALITY

Over and over again, educators and policymakers alike mouth the mantra: ALL kids ready for college and careers. But there remains a giant gulf between that rhetoric and the reality of today's high school graduates. Among recent graduates, fewer than 1 in 10 have taken a foundational set of courses they'd need to be both college- and career-ready. And almost half completed neither a college-prep nor a career-prep course sequence. Much like descriptions of the "shopping mall high school" back in 1985, our data show that today's students are still meandering through lots of disconnected courses that get them to graduation but nowhere else.<sup>26</sup>

Our data highlight some clear barriers to changing those patterns, including high rates of course failure that can crowd out other options for knowledge and skill development. And far too few students of color or from disadvantaged backgrounds are mastering content within their curricular pathway.

Despite these problems, most students aspire to a college degree. Importantly, most students *need a postsecondary degree or credential*. If they are to realize that goal, however, schools need to do a much better job at helping all of our students understand what is necessary to be fully prepared for credit-bearing coursework in college. For most students, this means an academic foundation *plus* a content focus aligned with their interests. Yet most students are not taking a career sequence in high school that would provide a foundation for further study, suggesting we do not have broad agreement about what career readiness means for high school students and how to accomplish it.

Overall, our findings reflect a focus on credit accumulation, rather than a focus on true readiness for life after graduation. This shortsightedness has long-term repercussions for students like Tre, who flounder in remedial courses once they get to college or struggle to find personally relevant and sustainable work. Since dropping out of college, Tre — once ecstatic to be the first in his family to go to college — now bounces around retail and service jobs, as they go in and out of season.

Still, these findings do not mean that our education system should revert back to tracking students into easy and hard pathways an adult may think are best suited to students' futures. College and career readiness is a new expectation that reflects the reality and demands students will face. It requires significant change to school structures, culture, and instruction to engage students in relevant work that prepares them for postsecondary study aligned with their interests. It's a huge shift for high schools, but a critical one if our education system is to groom students like Tre to pursue their goals and aspirations after graduation. ■

## NOTES

1. Out of respect for student privacy, Tre is a pseudonym.
2. Anthony P. Carnevale, Tamara Jayasundera, and Artem Gulish, "Good Jobs Are Back: College Graduates Are First in Line," (Washington, D.C.: Georgetown Center on Education and the Workforce, 2015), <https://cew.georgetown.edu/cew-reports/goodjobsareback/>.
3. (1) U.S. Department of Education, "U.S. Graduation Rate Hits New Record High," February 12, 2015, <http://www.ed.gov/news/press-releases/us-high-school-graduation-rate-hits-new-record-high-0>; (2) U.S. Department of Education, *Digest of Education Statistics: 2013*, NCES 2015-011, Chapter 3, (Washington D.C.: National Center for Education Statistics, May 2015), [http://nces.ed.gov/programs/digest/d13/ch\\_3.asp](http://nces.ed.gov/programs/digest/d13/ch_3.asp).
4. Xianglei Chen, *et al*, "Academic Preparation for College in the High School Senior Class of 2003-04," NCES 2010-169, (Washington, D.C.: National Center for Education Statistics, January 2010), <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010169>.
5. Peter D. Hart Research Associates and Public Opinion Strategies, "Rising to the Challenge: Are High School Graduates Prepared for College and Work? A Study of Recent High School Graduates, College Instructors, and Employers," (Washington, D.C.: Achieve, Inc., February 2005), [http://www.achieve.org/files/pollreport\\_0.pdf](http://www.achieve.org/files/pollreport_0.pdf).
6. David T. Conley and Charis McGaughy, "College and Career Readiness: Same or Different?" *Educational Leadership* 69, no. 7 (April 2012): 29-34; and David T. Conley, "Defining and Measuring College and Career Readiness," (presentation, Council of Chief State School Officers Annual Policy Forum, Phoenix, November 17-19, 2011), [http://programs.ccsso.org/projects/Membership\\_Meetings/APF/documents/Defining\\_College\\_Career\\_Readiness.pdf](http://programs.ccsso.org/projects/Membership_Meetings/APF/documents/Defining_College_Career_Readiness.pdf).
7. We have limited our sample to students who received a high school diploma from a public school by 2013. Students were removed if they had fewer than three years of transcript data available. Our data are representative of roughly 3.2 million ninth-graders who graduated from public high school by fall 2013.
8. Credits taken prior to ninth grade are not counted toward this definition. Students who took a full credit of integrated math were counted as having taken algebra II. Course credits have been standardized into Carnegie units, such that one Carnegie credit is equivalent to 120 hours of class time.
9. Peter A. Conforti, "What is College and Career Readiness? State Requirements for High School Graduation and State Public University Admissions," *Pearson Bulletin* 23 (May 2013), [http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN\\_Bulletin\\_23CRc\\_051413.pdf](http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN_Bulletin_23CRc_051413.pdf)
10. Career categories were based on a course classification system known as SCED (School Courses for the Exchange of Data) and aligned with the 16 Career Clusters designed by the Office of Career, Technical, and Adult Education. Some of the categories have been collapsed in order to maximize alignment, but these broader categories also make it easier to meet the career-ready requirements.

11. Saul Geiser and Maria Veronica Santelices, "Validity of High-School Grades in Predicting Student Success Beyond the Freshman Year: High-School Record Versus Standardized Tests as Indicators of four-Year College Outcomes," (Berkeley, California: Center for Studies in Higher Education, 2007), <http://files.eric.ed.gov/fulltext/ED502858.pdf>.
12. All results have been weighted (using W3W1STUTR) to make the findings representative of the student population. All reported differences are significant unless otherwise noted, using a p-value of 0.05 to determine significance.
13. Exact percentages are 9 percent for white and black students and 7 percent for Latino students. These differences are not statistically significant.
14. The difference rounds to 14 percentage points.
15. Of students who missed one requirement, 34 percent missed the math requirement. Two percent did not take enough math credits, and 32 percent missed the algebra II requirement. Students who took a full credit of integrated math were counted as having met this requirement.
16. Clifford Adelman, "The Toolbox Revisited: Paths to Degree Completion from High School Through College," (Washington, D.C.: U.S. Department of Education, February 2006), <https://www2.ed.gov/rschstat/research/pubs/toolboxrevisit/toolbox.pdf>.
17. For this analysis, we've examined the highest math course the student took in ninth grade.
18. Of students who missed only one requirement, 29 percent took fewer than two foreign language credits, whereas only 2 percent took courses in different foreign languages.
19. Peter A. Conforti, "What is College and Career Readiness? State Requirements for High School Graduation and State Public University Admissions," *Pearson Bulletin* 23 (May 2013), [http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN\\_Bulletin\\_23CRc\\_051413.pdf](http://researchnetwork.pearson.com/wp-content/uploads/TMRS-RIN_Bulletin_23CRc_051413.pdf)
20. "Closing the Expectations Gap: 2014 Annual Report on the Alignment of State K-12 Policies and Practice with the Demands of College and Careers," (Washington, D.C.: Achieve, Inc., January 2015), <http://www.achieve.org/publications/closing-expectations-gap-2014>. Note that a few local control states technically require no credits, as districts are responsible for making decisions related to graduation requirements.
21. This includes students who took the college-ready curriculum or no cohesive curriculum.
22. Camille A. Farrington, *Failing at School: Lessons for Redesigning Urban High Schools*, (New York, New York City: Teachers College Press, 2014).
23. Melissa Roderick, *et al*, "Preventable Failure: Improvements in Long-Term Outcomes When High Schools Focused on the Ninth Grade Year," (Chicago, University of Chicago Consortium on Chicago School Research, April 2014), <https://consortium.uchicago.edu/publications/preventable-failure-improvements-long-term-outcomes-when-high-schools-focused-ninth>.
24. For measures of college readiness, we've examined students' core GPAs, which include English, math, social studies, and science courses. This GPA is not perfectly aligned with our college-ready curriculum measure, as it does not include foreign language courses, but it provides a proxy measure of academic course mastery. For measures of career readiness, we've examined students' GPA in CTE coursework. These are the courses that make up all CTE concentrations, so they could include courses that comprise a career-ready sequence as well as other CTE courses that students may have taken. We selected a GPA of 2.5 to measure average performance, but prior research suggests that a 3.0 is even more aligned with college persistence.
25. Aspirations are determined from a survey question asking how far in school students think they'll get. For a small number of students who did not respond to this question in their junior year but responded in their freshman year, their earlier response has been imputed and reported here.
26. Arthur Powell, Eleanor Farrar, and David Cohen, *The Shopping Mall High School: Winners and Losers in the Educational Marketplace*, (Boston, Houghton Mifflin, 1985).

## **ABOUT THE EDUCATION TRUST**

The Education Trust promotes high academic achievement for all students at all levels, pre-kindergarten through college. We work alongside parents, educators, and community and business leaders across the country in transforming schools and colleges into institutions that serve all students well. Lessons learned in these efforts, together with unflinching data analyses, shape our state and national policy agendas. Our goal is to close the gaps in opportunity and achievement that consign far too many young people — especially those who are black, Latino, American Indian, or from low-income families — to lives on the margins of the American mainstream.




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**The Education Trust**

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HART RESEARCH ASSOCIATES PUBLIC OPINION STRATEGIES

# Rising to the Challenge: Are High School Graduates Prepared for College and Work?



Key findings from surveys among recent public high school graduates Conducted November 2014

## Methodology

- A national online survey was conducted October 31 to November 17, 2014, among 1,347 recent public high school graduates from the classes of 2011 through 2014, including:
  - 741 students who are currently enrolled in two-year and four-year colleges (320 of whom have taken at least one remedial course)
  - 606 graduates who are not currently enrolled in two-year or four-year colleges, including 215 who attended college but quit before finishing
  - 277 African-American and 375 Hispanic recent public high school graduates

Rising to the Challenge: Are High School Grads Prepared for College/Work? – November 2014 – Hart Research/PDS 2

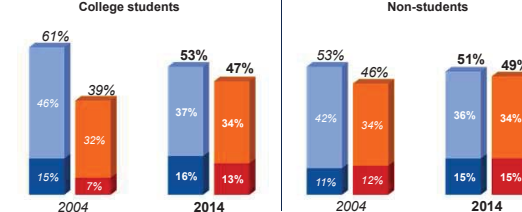
## Too many recent high school graduates report gaps in their preparedness for college and work after high school.

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## About half report gaps in preparation for life after high school

How well did your high school education prepare you for college/the working world?

■ **Extremely well** prepared for everything I face  
 ■ **Very well** generally able to do what is expected  
 ■ **Somewhat well** some gaps in my preparation  
 ■ **Not well** large gaps/struggle to keep up



Group	Year	Extremely well	Very well	Somewhat well	Not well
College students	2004	15%	46%	32%	7%
	2014	16%	37%	34%	13%
Non-students	2004	11%	42%	34%	12%
	2014	15%	36%	34%	15%

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How well did high school prepare you for college/work?

- Large gaps** in one or more subject areas:
  - 49% of college students
  - 43% of non-students
- At least some gaps** in one or more areas:
  - 83% of college students
  - 81% of non-students

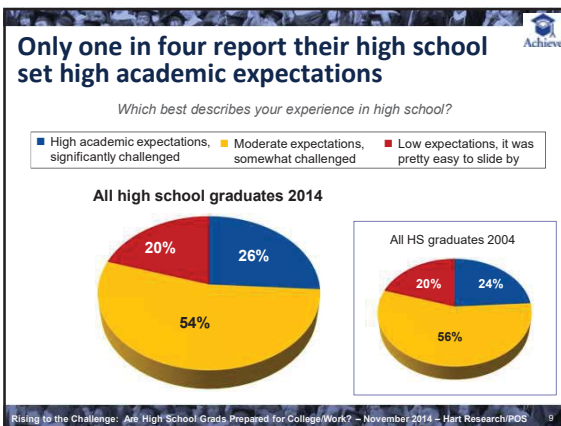
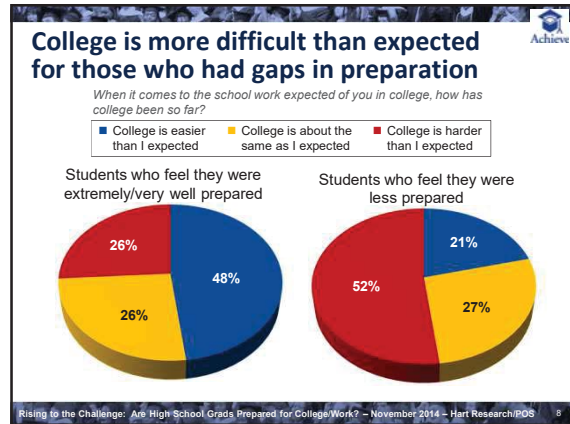
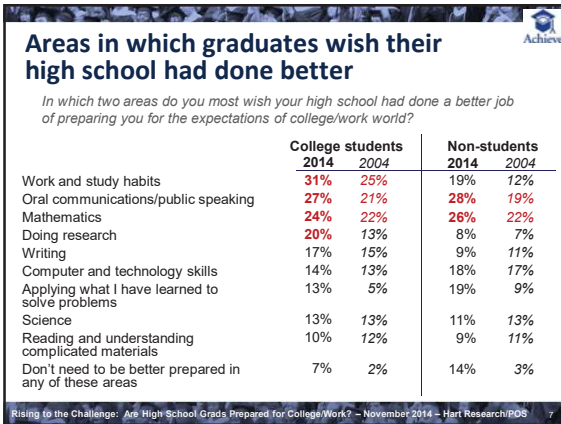
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## Significant gaps across subject areas

How well did high school prepare you for college/work in these areas?

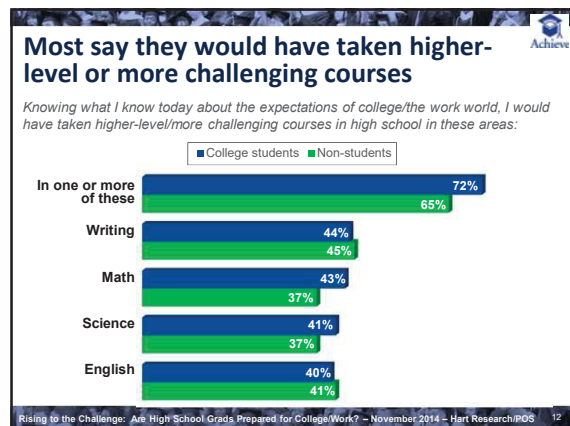
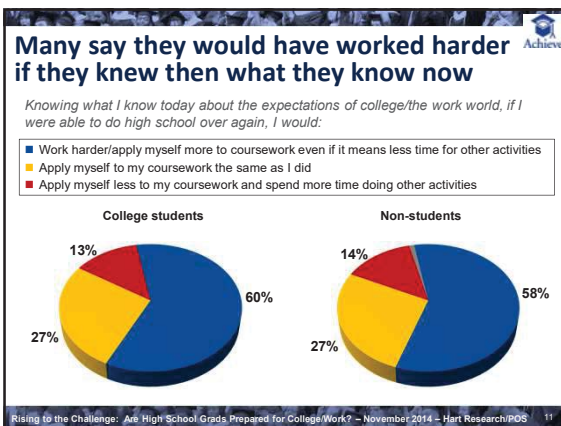
Subject Area	College students		Non-students	
	At least some gaps	Large gaps/struggling	At least some gaps	Large gaps/struggling
Work and study habits	50%	22%	41%	13%
Oral communications/public speaking	46%	18%	47%	16%
Doing research	45%	17%	32%	9%
Science	41%	14%	49%	18%
Applying what I have learned to solve problems	36%	12%	41%	13%
Mathematics	36%	12%	41%	15%
Writing	36%	9%	34%	10%
Computer and technology skills	31%	10%	34%	10%
Reading and understanding complicated materials	30%	7%	27%	6%

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## Knowing what I know now, I would have worked harder.

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### In their own words...

"If I could go back to high school, I would study hard and go to school every day. It wouldn't matter if I like the teacher or not, I just have to get through it to take that next step and go to college without taking pre-reqs, wasting money."  
Female, New Orleans, 2-Year College Student

"I'm struggling. I made it harder on myself. My family told me 'do what you have to do to take that next step.' I didn't do that. I rebelled and I was failing classes. I didn't get the basic skills I should have had when I got to college and it was harder for me."  
Female, New Orleans, 2-Year College Student

"I would put a little more effort into math class. I didn't put forth the extra effort and as a result I scored one point below what I needed for [University of New Orleans]. So, I had to go to Delgado instead and couldn't go into my major because I was set back and had to take a math remedial class to do what I want to."  
Male, New Orleans, 2-Year College Student

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## Potential Solutions Exist.

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### Most say they would have worked harder if expectations had been higher

If my high school had demanded more, set higher academic standards, and raised expectations of the course work and studying necessary to earn a diploma:

All high school graduates

I am CERTAIN I would have worked harder:	
Men	43%
Women	48%
Whites	42%
African Americans	53%
Hispanics	50%
All college students	48%
In two-year college	49%
In four-year college	47%
Took remedial classes	54%
No college	39%
Some college/dropped out	45%
Extremely/very prepared	51%
Less prepared	39%

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### Those who experienced higher expectations feel better prepared

The education I received in high school prepared me extremely or very well for college/the working world:

College students whose high school had:

- High academic expectations: 74%
- Moderate academic expectations: 50%
- Low academic expectations: 36%

Non-students whose high school had:

- High academic expectations: 72%
- Moderate academic expectations: 53%
- Low academic expectations: 45%

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### Grads of schools that excel at encouraging students to take the most advanced courses feel better prepared

The education I received in high school prepared me extremely or very well for college/the working world:

College students who say their high school did:

- A very good or good job encouraging students to take most advanced courses: 61%
- A fair or poor job encouraging students to take most advanced courses: 37%

Non-students who say their high school did:

- A very good or good job encouraging students to take most advanced courses: 59%
- A fair or poor job encouraging students to take most advanced courses: 39%

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### Grads who took math beyond Algebra II feel better prepared

The math I took in high school prepared me extremely or very well for college/the working world:

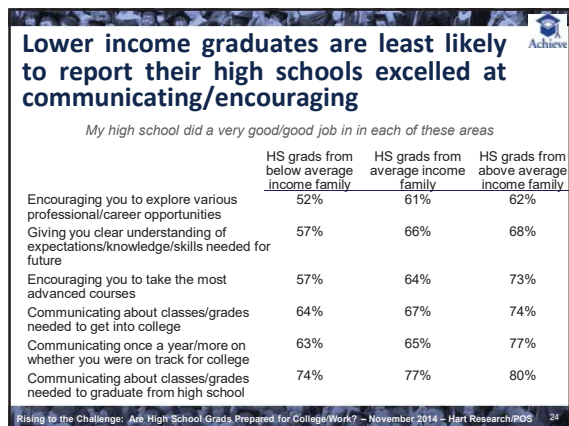
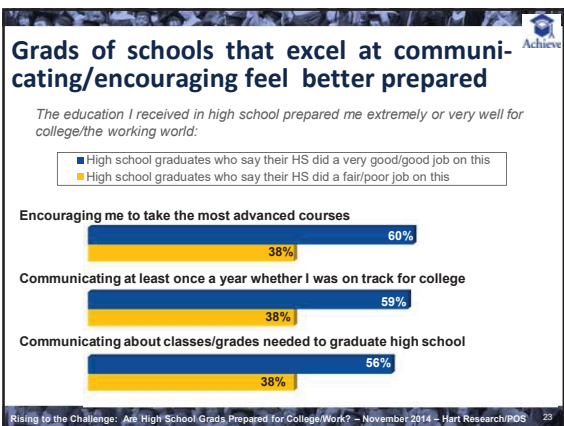
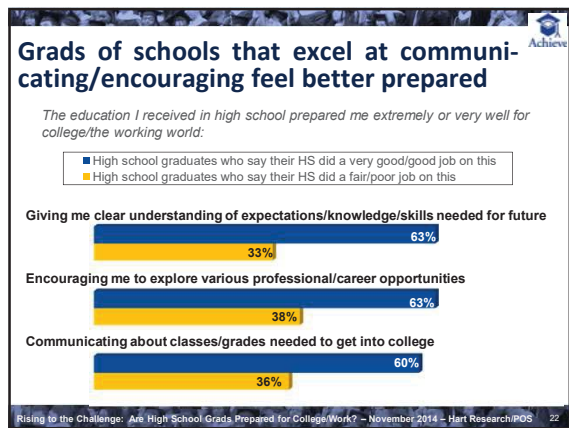
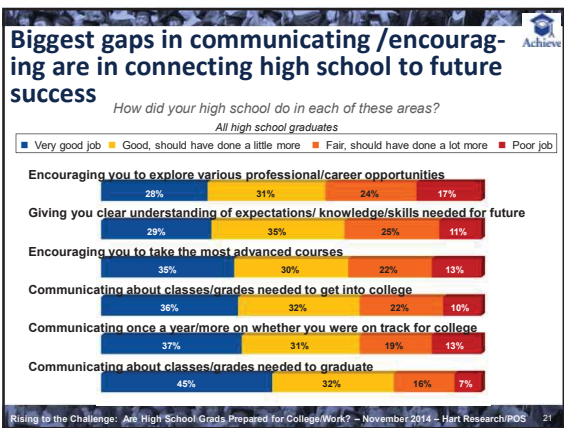
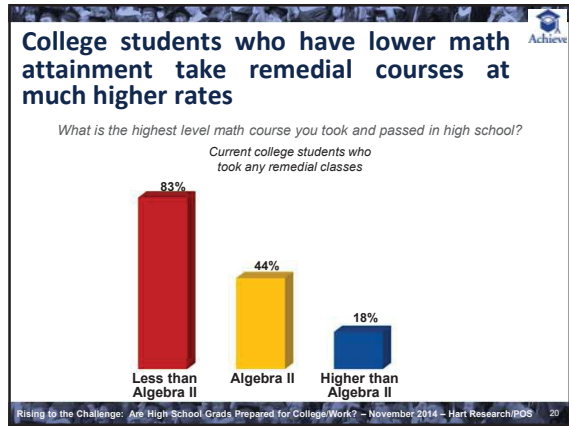
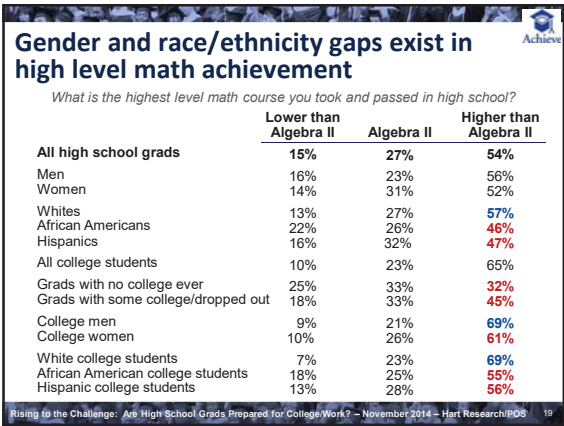
College students who took:

- Higher than Algebra II math classes: 71%
- Algebra II or lower math classes: 48%

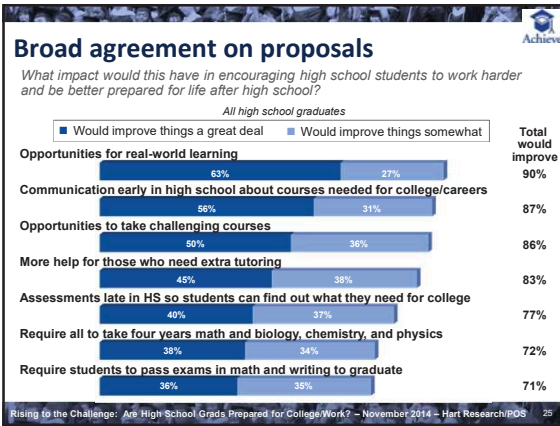
Non-students who took:

- Higher than Algebra II math classes: 71%
- Algebra II or lower math classes: 52%

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- ## The bottom line: Findings
- Nearly half of recent high school graduates report they were not fully prepared for their next steps
  - They see clear gaps in their preparation, and this has real consequences:
    - Only one quarter feel their high school set high expectations
    - Over one quarter wish their high school had done a better job in key areas: study habits, communications, and math
    - Four in ten current students find college more difficult than expected
  - Recent grads tell us they would have worked harder if they had fully understood the challenges that lay ahead
  - Both college students AND non-college students report not having as much academic preparation as they needed
  - Recent Grads—whether they are in college or working—feel better prepared if they took more advanced courses in high school
- Rising to the Challenge: Are High School Grads Prepared for College/Work? – November 2014 – Hart Research/POS 26

- ## The bottom line: Solutions
- The research suggests that providing real academic challenge for high school students and communicating with them about what is needed for future success helps to better prepare grads for the road ahead
  - Providing consistent and regular signals to ALL high school students about what academics are needed to be ready for college and careers is key:
    - Set rigorous expectations, students will rise to the challenge
    - Have graduation requirements that ensure academic preparation for all
    - Encourage all students to take the most advanced classes
    - Ensure the rigor of classes offered; reliance on course titles can lead to watered down courses
    - Communicate with students early in high school (if not before) about the expectations and skills (including courses) needed for future success—including college admissions and career interests
    - Regularly tell students whether they are “on track”
    - Tie learning in high school to life outside the classroom by providing real-world learning opportunities
    - Provide support/help for students who need it (e.g. tutoring)
    - All means ALL. Be sure all students understand and know the benefit of academic preparation for college and careers; everyone needs to be prepared for their next steps.
- Rising to the Challenge: Are High School Grads Prepared for College/Work? – November 2014 – Hart Research/POS 27

# **Preparing High School Students for Successful Transitions to Postsecondary Education and Employment**



This issue brief is offered by the National High School Center, a central source of information and expertise on high school improvement issues that does not endorse any interventions or conduct field studies. Funded by the U.S. Department of Education, the National High School Center serves the Regional Comprehensive Centers in their work to build the capacity of states across the nation to effectively implement the goals of No Child Left Behind relating to high schools. The National High School Center is housed at the American Institutes for Research and partners with other leading education research organizations such as Learning Point Associates, National Center for Educational Achievement (NCEA), WestEd, and MDRC, the organization responsible for the primary authorship of this report. *The contents of this report were developed under a grant from the U.S. Department of Education. However, those contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government.*

# Preparing High School Students for Successful Transitions to Postsecondary Education and Employment

## ISSUE BRIEF AUTHOR

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Michael Bangser  
MDRC

August 2008

## At-a-Glance

### KEY ISSUE

Students' high school experiences often do not prepare them adequately for postsecondary education and the world of work. Special attention should be paid to increasing the rigor, relevance, and engagement of the high school curriculum, including for students who have traditionally faced barriers to successful postsecondary transitions.

### Primary Finding

A number of promising approaches are available to improve transitions from high school. However, effective implementation of these approaches will require sustained financial support along with appropriate investments in technical assistance and professional development.

### TAKE-AWAYS

#### State Level

- Align high school curricula, graduation standards, and assessments with the expectations of postsecondary educational institutions and employers.
- Hold high schools accountable for increasing the percentage of graduates who complete a curriculum that prepares them for postsecondary education and

## Preparing High School Students for Successful Transitions to Postsecondary Education and Employment

by Michael Bangser of MDRC

### INTRODUCTION

In the current information- and technology-based economy, a high school diploma is no longer sufficient as a terminal degree. Most of the fastest-growing jobs that pay reasonably well require at least some postsecondary education<sup>1</sup> (Carnevale & Desrochers, 2003). However, due to what is often characterized as a leaky educational pipeline, too many students fail to complete high school and make a successful transition to postsecondary education and careers.

Nationally, almost 30% of students do not graduate from high school with a regular diploma (Swanson, 2004). Many of the students who do graduate decide to combine work with various forms of postsecondary education during a period when their career plans are still evolving (Haimson & Deke, 2003; McDonough, 2004). Whatever specific paths young people pursue, it is increasingly clear that the skills needed for work often mirror those required for admission to and success in postsecondary education (ACT, 2006; Carnevale & Desrochers, 2003).

This Issue Brief reviews lessons from studies of selected policies and programs designed to improve students' preparation for postsecondary pathways. Special emphasis is placed on ways to help those who traditionally face substantial barriers to success, including low-income students, African American and Latino students, and students with disabilities.

### THE CHALLENGE

Students' high school experiences too often fail to prepare them for postsecondary education or for the rigors of work in an information-based economy.

Surveys consistently show that many high school graduates do not meet employers' standards in a variety of academic areas, as well as in employability skills such as attendance, teamwork and collaboration, and work habits. (National Association of Manufacturers, 2005; Peter D. Hart Research Associates, 2005). In addition, many students enter postsecondary education needing remedial coursework. Even when they receive remediation, these students are less likely to earn a degree or certificate than students who do not need remediation (Wirt et al., 2004).

### State Level

today's information-based workforce demands.

- Create governance mechanisms and financial incentives to align K–12 and postsecondary planning and budgets.
- Provide feedback to high schools by creating a system for tracking students across the K–12 and postsecondary education systems and into the workplace.
- Develop financial aid policies that provide incentives not only to attend but also to complete postsecondary education.

### District and School Levels

- Intervene early, when students are developing their college and career aspirations.
- Emphasize rigor and high expectations for all students, along with appropriate counseling and other supports.
- Integrate strong academic content into career-focused classes.
- Collaborate with postsecondary institutions, economic development agencies, and employers to help create smoother transitions to college and the workforce.

Transitions from high school to postsecondary education and employment can be particularly challenging for students with disabilities. Although there has been an increase in postsecondary attendance (especially at community colleges) by students with disabilities, their enrollment rate is still well below that of their peers in the general population. The employment rate of students with disabilities soon after leaving high school also remains well below that of their same-age peers (Wagner et al., 2006). Moreover, students with disabilities are faced with fragmented services, limited program accessibility, and training that too often focuses on low-paying jobs (National Council on Disability, 2007). (Strategies to promote successful postsecondary transitions for students with disabilities are presented throughout this Issue Brief but particularly in the section beginning on page 14.)

### IMPLEMENTATION LESSONS AND CHOICES

Varied strategies have been implemented to prepare high school students for postsecondary education and employment. Table 1 includes examples of some specific programs; however, this Issue Brief focuses on cross-cutting lessons that decisionmakers should consider in tailoring programs and policies to their specific state and local circumstances.<sup>2</sup> This information can be supplemented by referring to more detailed discussions in the Additional Resources listed at the end of this publication.

#### Preliminary Program Design Issues

Those responsible for designing policies and programs to prepare students for successful postsecondary transitions should first address three overarching questions:

**1. When should the intervention start?** Interventions that begin in the junior or senior year can be too late—certainly for those students who have already dropped out but also for those who have aspirations for postsecondary education but have not passed the required courses. By beginning earlier, it is possible to engage students when they should be developing initial postsecondary education and career aspirations accompanied by an appropriate academic plan (McDonough, 2004).

Students need to pass core ninth-grade courses in English, math, science, and social studies if they are to remain on track for high school graduation (Allensworth & Easton, 2005; Schneider, 2006). If students do not pass key “gatekeeper courses” such as Algebra I on time, it can be difficult to complete the full sequence of coursework needed for postsecondary education, particularly in 4-year colleges (Paul, 2005; Schneider, 2006). Students must understand the importance of taking and passing the early courses, and schools must provide sufficient access to these courses along with the necessary supports to help students pass them.<sup>3</sup>

**TABLE 1**

**Characteristics of Selected Interventions To Promote Successful Transition to Postsecondary Education and Employment**

**Dual-Credit Programs**

**Examples:**

*Dual enrollment*

- Courses are taken in high school that are equivalent to those taken at a postsecondary institution.
- Credit is awarded on both the high school transcript and the transcript of the sponsoring postsecondary institution.

*Early college high schools*

- Students earn up to an associate’s degree or 2 years of credit toward a baccalaureate degree while in high school.
- The middle grades are included, or there is outreach to middle-grade students, to promote academic preparation and awareness of the Early College High School option.

*Middle college high schools*

- Secondary schools, usually grades 10–12, are located on or adjacent to college campuses.
- Students can take high school and college courses; they receive a high school diploma and can earn college credits.

**Tech Prep**

- Combines a minimum of 2 years of secondary education with a minimum of 2 years of postsecondary education in a nonduplicative, sequential course of study.
- Integrates academic, vocational, and technical instruction, and uses work-based and worksite learning where appropriate.
- Leads to an associate or baccalaureate degree in a specific career field.

**Career and Technical Education (Under the Carl D. Perkins Career and Technical Education Act of 2006—Perkins IV)**

- The new Act provides an increased focus on the academic achievement for career and technical education students, strengthens the connections between secondary and postsecondary education, and improves state and local accountability.

**Career Academies**

- “School-within-a-school” structure normally serves 30–60 students per grade from grades 9 or 10 through grade 12.

- Academic and occupational curricula are combined around a career theme, such as health or business and finance.
- Employer partnerships provide career awareness activities and work internships related to the career theme.

### Federally Funded College Preparatory Programs

#### Examples:

- TRIO programs—educational opportunity outreach programs, including Upward Bound and Talent Search, designed to motivate, support, and prepare students from disadvantaged backgrounds for college.
- GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs)—a discretionary grant program of the U.S. Department of Education that provides states with funding to create local partnerships serving cohorts of students beginning no later than grade 7 and extending through high school.

### Other College Preparatory Programs

#### Examples:

- AVID (Advancement Via Individual Determination)—a grade 4 through 12 system to prepare students in the academic middle for 4-year college eligibility through the use of advanced in-school courses, an AVID-specific curriculum and elective, and tutors.
- Project GRAD (Graduation Really Achieves Dreams)—an integrated approach that includes scholarships for students meeting achievement and participation goals, summer institutes on college campuses, parental and community involvement, social services and academic enrichment programs at the school site, and interventions at “feeder schools” of participating high schools.
- Career Beginnings—promotes college enrollment and better job skills through collaborations among colleges, public schools, and businesses. The program utilizes summer jobs, workshops, classes, and counseling to assist juniors and seniors who have average academic performance with their career plans and applications to college.

### Scholarship and Financial Aid Programs

A range of programs that combine some or all of the following elements:

- Public and/or private funding<sup>4</sup>
- Broad-based eligibility or a focus on economically disadvantaged students
- Academic or other requirements such as a threshold grade point average (GPA), graduation from a high school in the state, or attendance at a postsecondary institution in the state.
- Commitment of college scholarship funds early (such as in the middle grades) or later in high school.
- Stand-alone financial aid or accompanying academic, mentoring, and other supports.
- Tuition tax credits as well as scholarship assistance.



*2. Broad-based or targeted approaches?* In allocating limited resources, policymakers and administrators must decide, for example: (a) the proper balance between whole school reforms that reach all or most students, and more targeted efforts for specific categories of students; and (b) whether to prepare students for particular career or educational paths, or to provide them with maximum flexibility to take advantage of a range of options.

In making these choices, policymakers and administrators should consider the following:

- Sometimes, a special intervention improves postsecondary outcomes for at-risk students, but not for higher performing students who would have done just as well without it. This was true for employment outcomes in a study of Career Academies (Kemple, 2004) and for 4-year college attendance in a study of Upward Bound (Myers et al., 2004), both of which are discussed further in the companion Research Brief. It may, however, be helpful for these programs to serve students with a range of abilities; otherwise, teachers and students might have lower expectations of the programs, seeing them as weaker, remedial efforts (Moore & Myers, 2004; Oakes & Saunders, 2007).
- Concerted outreach may be needed to overcome preconceptions (by staff and students alike) about the nature of certain courses and the types of students they serve. For example, operators of dual-credit programs, which give students high school and college credit simultaneously and which have traditionally enrolled mostly higher performing students, could use outreach methods such as mailings, school fairs, and counselor referrals to attract a broader range of participants (National High School Center, 2007).
- Many students with disabilities are unaware of their full potential. It is important to expose these students early to resources and information that help them develop the decisionmaking and self-advocacy skills that they will need during the transition process and after high school (National Council on Disability, 2007).
- Blending career-oriented and academic courses could help students avoid premature career decisions, while enabling them to see the practical application of academic subject matter (Oakes & Saunders, 2007). Grounding the curriculum in a specific career can lend helpful focus and context to the instruction but should not be cast as a permanent choice, because students often change their plans (Haimson & Deke, 2003).

*3. How comprehensive?* Stand-alone interventions, such as tutoring, may be insufficient for students with multidimensional needs. For these students, a comprehensive combination of rigorous coursework along with counseling, ongoing assessment, financial aid, and other supports may be necessary, especially to keep struggling students and students with disabilities on track for high school graduation and postsecondary success (Lerner & Brand, 2006; National Council on Disability, 2007; The Education Trust, 2005).

#### **Curricula and Instruction**

High school curricula need to be rigorous, relevant, and engaging to prepare students for successful postsecondary activities.

*High expectations and rigor.* Students—including those with previously low achievement levels—who take more rigorous, academically intense programs in high school enroll and persist in postsecondary education at higher rates than similar students who pursue less challenging courses of study (Adelman, 2006; Oakes & Saunders, 2007). In addition, many students who enter the workforce immediately upon high school graduation now need the same level of skills and knowledge as students entering college (Kline & Williams, 2007). Therefore, it is important to create a culture of high standards with consistent, schoolwide messages about the standards needed for postsecondary success (Schneider, 2006; The Education Trust, 2005).

A number of factors, notably high expectations and efficient use of class time (The Education Trust, 2005), can contribute to a course's level of rigor. In the case of dual-credit and other programs that link high schools with local colleges, the level of rigor might be influenced by the course's location (whether at the college or the high school), the type of instructor (a college or a high school teacher), prerequisites, course length, and mix of high school and college students in the class. It is important to distinguish in these programs between courses that are "college like" and courses that are truly "college level" (Lerner & Brand, 2006; National High School Center, 2007).

Expanded access to Advanced Placement (AP) courses is another means of increasing rigor. Six states (Alabama, Georgia, Kentucky, Maine, Nevada, and Wisconsin) have received grants to expand disadvantaged students' participation in AP courses, and the Texas Advanced Placement Incentive Program has reportedly led to teachers viewing more students as ready for AP coursework (see [www.collegeboard.com](http://www.collegeboard.com); [www.nga.org](http://www.nga.org)).

**Alignment.** Concern that students' high school experiences are disconnected from the expectations of postsecondary educational institutions and employers has prompted calls to transform the kindergarten through grade 12 (K–12) system into a more integrated kindergarten through college (K–16) or preschool through college (P–16) system. This change would engage governors, education officials at both the K–12 and college levels, business executives, and others working together to improve the alignment of high school curricula with the expectations of postsecondary education and work. One response is the American Diploma Project, in which states have committed to an ambitious agenda with four goals:

- Aligning high school standards with postsecondary and workplace expectations.
- Upgrading high school course requirements so that students take a college- and work-ready curriculum.
- Streamlining assessment systems so the tests that high school students take serve as readiness tests for college and the workforce.
- Holding both high schools and postsecondary institutions accountable for student success.

Achieve, Inc. (2007*b*) reports a number of specific examples of state developments in these areas:

- Thirteen states have end-of-course testing in place to ensure rigor.
- Rhode Island and Delaware plan to review all district high school curricula to confirm that they are aligned with state standards (an approach that might be more feasible in small states).
- Seven states (Delaware, Georgia, Indiana, New York, North Carolina, Oklahoma, and Texas) hold high schools accountable for increasing the percentage of graduates who complete college- and work-ready curricula.

Indiana, Texas, and Louisiana are among the states that make a college preparatory curriculum the default requirement for all high school students. For example, effective in the fall of 2007, Indiana's Core 40 curriculum includes a balanced sequence of rigorous courses in the core subjects of English/language arts, mathematics, science, and social studies, as well as physical education/health and wellness and electives. To graduate with fewer than the Core 40 courses, a student must complete a formal opt-out process with parental consent ([www.indianacore40scholars.org](http://www.indianacore40scholars.org)).

Washington State's Transition Mathematics Project (TMP) is a statewide public–private partnership that provides information and support to prepare students for successful transitions to postsecondary education in mathematics. For example, TMP works to align 11th- and 12th-grade curricula with introductory college curricula and placement tests, to build teachers' capacity to carry out this program, and to communicate high mathematics expectations to students (see [www.hecb.wa.gov](http://www.hecb.wa.gov)).

*Teachers' professional development.* Teachers in schools that serve disadvantaged populations are often less experienced and less knowledgeable about the subjects they teach than are teachers in more affluent communities (Jerald, 2002). Some steps to consider in response to these concerns include:

- Providing teachers with well-designed, established curricula rather than expecting them to create their own.
- Providing training in advance through undergraduate, graduate, or continuing education courses as well as ongoing coaching of teachers.
- Encouraging teachers to work together to align curricula with standards, create lesson plans, and discuss ways to make classroom activities more engaging.
- Enlisting department-wide support.
- Providing pre-service and in-service training that prepares teachers for the real-life resource constraints and student learning needs in schools that enroll high numbers of low-performing students (Herlihy & Quint, 2006; McDonough, 2004).

*Integration of academic and technical content.* Recognition that career and technical education (CTE) should include challenging academics is reflected in the Carl D. Perkins Career and Technical Education Act of 2006 and in efforts by a growing number of states (NGA Center for Best Practices, 2007). Yet CTE teachers often feel that they have received insufficient training on how to integrate academic and technical content (Silverberg et al., 2004).

Useful ideas can be drawn from an effort in which mathematics teachers were paired with and supported CTE teachers but did not team teach or teach the mathematics themselves. The project evaluators concluded, among other things, that CTE programs should:

- Develop a “community of practice” among a critical mass of teachers, with the mathematics teachers committing to provide regular support to CTE teachers before and after classes.
- Identify opportunities for CTE teachers to teach mathematics concepts as they naturally occur within the CTE curriculum.
- Provide mathematics and CTE teachers sufficient time to engage fully with each other and to develop a collegial relationship.
- Consistently emphasize to students that mathematics is an essential workplace skill (Stone et al., 2006).

The integration of career-focused and academic content is not necessarily limited to students specifically in CTE classes. Proponents of the Multiple Pathways approach, for example, believe that all students would benefit from a rigorous combination of academic and career-focused learning, along with preparation for civic participation (Oakes & Saunders, 2007).

#### **Counseling, Assessment, and Other Supports**

High schools can provide a range of supports to complement students' academic preparation for college and the workforce.

*Early and ongoing counseling for students and their families.* Counselors can be particularly influential with students from disadvantaged backgrounds; important elements include the provision of information on college costs, financing options, and courses required for college admission (McDonough, 2004). A college-going culture should be instilled for incoming ninth-grade students (The Education Trust, 2005) and is enhanced if counselors have reasonable caseloads,

are held accountable for college enrollment, and receive specific training in college counseling (McDonough, 2004). Counselors who work with students with disabilities should be trained to help identify postsecondary institutions that offer appropriate support services and to develop the documentation that will be needed for students to receive necessary accommodations. In schools with limited resources and high counselor caseloads, mentoring programs or drop-in offices staffed by college students or other community volunteers can be helpful (Schneider, 2006).

**Assessment.** Counseling should be supported by assessment data as part of a concerted “early warning system,” beginning in ninth grade, that identifies struggling students and ensures that they get the additional help they need (The Education Trust, 2005). The early and regular assessments should be tied to measures of college and workplace readiness. For example, mathematics testing programs in Kentucky, North Carolina, and Ohio offer students, beginning in their sophomore year, feedback on whether students are on track to succeed in college-level mathematics.

Although, according to Achieve, Inc. (2007a), states have made limited progress in aligning high school assessments with the demands of postsecondary education and the workplace, notable examples include:

- California’s Early Assessment Program (a collaboration among the State Board of Education, California Department of Education, and the California State University system) and the Texas Assessment of Knowledge & Skills (which is aligned with statewide curricula) are assessment tests taken by students in the 11th grade that are used for freshman placement in higher education.
- Colorado, Idaho, Illinois, Kentucky, Maine, and Michigan have incorporated SAT and/or ACT college admissions tests into their state assessment systems for all students, not just the college-bound students.
- New York’s end-of-course Regents Exams are used both for high school accountability and for college placement.

The approaches used in these states reduce confusion about what is required for students to be ready for college-level work and also reduce the number of tests that students need to take. Achieve, Inc. (2007a) does, however, recommend that assessments that incorporate college placement exams should also include additional questions or performance measures to ensure alignment with the full range of advanced concepts and skills needed for successful postsecondary transitions. For example, Maine and Michigan include items supplementing the regular questions on the SAT and ACT, respectively. Maine has worked with the College Board to develop supplemental items in statistics and data, which are part of the state’s standards but not extensively assessed on the SAT (Achieve, Inc., 2007b).

**Career awareness and workplace readiness.** Exposure to the world of work can be important because high school students often lack information on the educational requirements for particular jobs (Schneider, 2006). Relevant activities include, for example, paid and unpaid internships, guest lecturers from the business community, career days, youth apprenticeships, and job shadowing. Students report that one-on-one contacts with employers onsite are more helpful than group worksite tours or school-based activities (Haimson & Deke, 2003).

The increased post-high school earnings for young men participating in Career Academies appeared to be linked to career awareness sessions and internships that provided participants with helpful work experience and job references. This work experience should be structured to complement, not substitute for, students’ academics (Kemple, 2004).

**Other supports and incentives.** Additional steps to help keep students engaged and learning include:

- A positive relationship with a caring adult mentor, which can be provided individually or in groups; by teachers, other school staff, college students, or members of the community; and either in the school or outside the school (Lerner & Brand, 2006).

- “Advisories,” used as an alternative to regular homeroom periods, that include small, supportive groups led by school staff who develop a personal relationship with students (Herlihy & Quint, 2006).
- Small learning communities, in which students sharing the same cadre of core-subject teachers in a personalized environment come to feel that their teachers know and care about them (Herlihy & Quint, 2006).
- Notification in middle school or early high school that financial aid for postsecondary education will be available if students meet certain conditions, as in Indiana’s Twenty-First Century Scholars Program and Oklahoma’s Higher Learning Access Program, both of which are targeted to low-income students. State-funded early-commitment scholarship programs can be complemented with academic and other supports, partnerships with businesses and foundations, and later “hands on” help with college and financial aid applications, as well as visits to college campuses to shadow students at host institutions (Blanco, 2005; Constantine et al., 2006).
- Early practice and counseling on the content of college placement exams supplemented with SAT/ACT preparation classes and payment of students’ test fees. For example, the Northwest Education Loan Association has conducted SAT preparation classes for low-income students in the Seattle area ([www.nela.net](http://www.nela.net)). ACT’s PLAN program helps students measure their current academic development, explore career and training options, and make plans for their remaining high school and postsecondary years. The “pre-ACT” test is typically administered in the fall of the sophomore year and provides an estimate of the student’s predicted scores on the actual ACT test ([www.act.org/plan](http://www.act.org/plan)).
- Early forums for students with disabilities and their parents to increase their knowledge of the resources and accommodations that are important for a successful transition to postsecondary education and employment (National Council on Disability, 2007).

#### **Collaboration and Joint Accountability**

States, school districts, and individual high schools can all play key roles in promoting collaborations that facilitate successful transitions to postsecondary education and employment. For example:

*Collaborations with postsecondary institutions.* As noted earlier, joint planning between high schools and colleges helps ensure that high school curricula and assessments are aligned with postsecondary requirements. Also, the National Association of System Heads and the Education Trust have put together a network of state university systems and K–12 leaders to foster K–16 systems in their states ([www2.edtrust.org](http://www2.edtrust.org)).

High schools and community colleges often cooperate in various forms of dual-credit programs. High schools and their students benefit when community colleges offer laboratory and other courses not available at the high school, while participating community colleges benefit from a pipeline of current and future students (Bailey & Karp, 2003; Lerner & Brand, 2006). Efficient dual-credit systems may improve postsecondary outcomes by shortening the time it takes for students to earn a degree, thereby reducing the cost of postsecondary education (Bailey et al., 2002). Although dual-credit programs hold strong promise, additional research is needed to confirm their impact on postsecondary outcomes (Lerner & Brand, 2006).

*Collaboration with employers and economic development agencies.* Youth apprenticeships, internships, and job shadowing can be helpful components of an overall program. The experience of Career Academies suggests the benefits of carefully structured partnerships between high schools and employers, as well as having the school designate a full-time staff member to serve as a liaison to employers (Kemple, 2004).

CTE and other programs should establish effective working relationships with private industry, economic development agencies, and workforce investment boards. These efforts can be strengthened by carefully identifying growth

industries, as has been done in Maryland, where state agencies have joined with employers to design and validate high-growth industry clusters (NGA Center for Best Practices, 2007). IBM's Entry Point program places students with disabilities into summer internships and camps that focus on providing training to students beginning in middle school. These experiences often lead to regular employment. In Jacksonville, Florida, the High School/High Tech Program exposes students with disabilities to careers in high tech industries through field trips and mentoring opportunities (National Council on Disability, 2007).

**Data and accountability.** Documentation of, and accountability for, transitions from high school are complicated by the difficulty of tracking students across disconnected education systems and into the workplace. The fact that records in the K–12 and postsecondary systems are often not linked impedes creation of a high-quality data system spanning the K–16 continuum.

The Data Quality Campaign is a concerted effort to address the challenges of constructing longitudinal data systems to help track student progress and determine the value-added of specific schools and programs. The Campaign suggests 10 essential elements for an effective longitudinal data system, including, for example:

- Unique student identifiers to connect student demographic, enrollment, program participation, transcript, test score, and graduation data across key databases across years.
- A teacher identifier system with the ability to match teachers to students.
- A state data audit system assessing data quality, validity, and reliability.

The Data Quality Campaign's Web site ([www.dataqualitycampaign.org](http://www.dataqualitycampaign.org)) provides detailed information on individual states' efforts in these areas. Although important challenges remain, such as defining core data elements, addressing issues under the Families Educational Rights and Privacy Act (FERPA), and linking systems, a number of states have made great strides. For example, Florida has the capacity to track students' progress through the state's education system and into the workforce (Achieve, Inc. 2007*b*; Callan et al., 2006). Arkansas, Louisiana, Massachusetts, and Texas report that they can track students from kindergarten through college graduation (Achieve, Inc., 2007*b*). Kentucky reports on high school graduates' college preparation and participation, including comparative information at the school, district, and state levels on ACT and AP test taking and success ([www.dataqualitycampaign.org](http://www.dataqualitycampaign.org)).

### Finances

Decisions on financing of interventions to promote successful transitions should consider the following factors:

**Relative costs.** Some choices described in this Issue Brief could require additional expenditures—for instance, for supplementary supports, smaller counselor caseloads, and accelerated credit options such as AP and dual-credit programs—but the benefits may be worth the additional upfront cost (see State of Florida, Office of Program Policy Analysis and Government Accountability, 2006).

**Financial incentives to foster a K–16 system.** States can combine K–12 and postsecondary per-pupil reimbursements into a K–16 innovation fund, as in North Carolina's Innovative Education Initiatives Act (National Governors Association, 2003). Broader financial incentives for an integrated K–16 system might require holding high schools and colleges jointly accountable for outcomes, as well as merging what are now typically separate K–12 and higher education executive and legislative structures that oversee budget decisions (Venezia et al., 2005).

**Multiple interests.** Stakeholders at the federal, state, and local levels, as well as college and school administrators and parents, all have particular perspectives—and occasionally competing interests that need to be balanced. For example,

it can be complicated in dual-credit programs to determine how to reimburse participating high schools and colleges fairly while not paying twice for the same students or placing financial burdens on students (Lerner & Brand, 2006). In North Carolina and Michigan, high schools and colleges share the cost of dually enrolled students (National High School Center, 2007).

*Covering a range of costs.* Low-income students may not be able to bear even minimal costs for program participation. Financial assistance might, therefore, need to cover such items as laboratory fees, test fees, textbooks, and transportation (Lerner & Brand, 2006).

*Structuring scholarship assistance.* The factors listed under Scholarship Incentive Programs in Table 1 will all have implications for the number of students who can be supported with available funding. Public funding should create incentives for both the student and the college to emphasize *completion* of the degree, not only initial enrollment. For example, limiting financial aid to only a portion of students' college tenure could be shortsighted.

*Investments in quality implementation.* Intensive program development and continuous improvement efforts are often needed to ensure program quality. Despite the inevitable budgetary pressures, it can be worthwhile to enlist outside expertise for technical assistance and professional development as one way to promote effective program implementation (e.g., Grubb & Stern, 2007; Quint, 2004). Watered-down versions of promising interventions might not produce the expected results.

## SUCCESSFUL TRANSITIONS FOR STUDENTS WITH DISABILITIES

As is the case with other students, those with disabilities are a diverse population with multidimensional needs. Many of the lessons described earlier in this Issue Brief will benefit all students, while the section below places particular emphasis on meeting the needs of students with disabilities.

IDEA 2004 [section 614(d)(1)(A)(i)(VIII)] requires that students age 16 or older have Individualized Education Programs (IEPs) that include appropriate measurable postsecondary goals, based on age-appropriate transition assessments. States are required to report on the “[p]ercent of youth aged 16 and above with an [IEP] that includes coordinated, measurable, annual IEP goals and transition services that will reasonably enable the student to meet postsecondary goals [(20 U.S.C. 1416(a)(3)(B)).” Transition requirements under IDEA 2004 include, in summary [section 614(d)(1)(A)(i)(VIII)]:

- An assessment process that focuses on identifying one or more postsecondary goals for students.
- Specification of one or more postsecondary goals in the areas of education/training, employment, and/or independent living, as appropriate.
- Specification of one or more annual IEP goals that are directed to assist students to meet their postsecondary goals.
- Specification of transition services in the IEP (including instruction, community experiences, and other activities as appropriate) that are designed to facilitate the transition from school to anticipated postschool environment(s) and the achievement of postsecondary goals.

In addition, Indicator 14 requires states to report on the percentage of students with IEPs who, within 1 year of leaving high school, have been competitively employed, or attended some type of postsecondary education, or both. A complete listing of transition requirements is available at <http://idea.ed.gov/download/statute.html> and [idea.ed.gov/explore/view/p/%2Croot%2Cdynamic%2CTopicalBrief%2C17%2C](http://idea.ed.gov/explore/view/p/%2Croot%2Cdynamic%2CTopicalBrief%2C17%2C). The National Secondary Transition

Technical Assistance Center has developed a checklist and is preparing training materials for states to use in carrying out their responsibilities ([www.nsttac.org/content/i13/i13aprchecklist.pdf](http://www.nsttac.org/content/i13/i13aprchecklist.pdf)). In addition, a comprehensive report by the National Council on Disability reviews the issues and existing knowledge related to the employment of people with disabilities. The report presents new information on the perspectives of employers, people with disabilities, and the disability specialist on the key factors that either limit or facilitate employment (National Council on Disability, 2007).

Transition planning for students with disabilities should particularly reflect the following considerations:

***A different postsecondary environment.*** Although nondiscrimination statutes, such as the Americans with Disabilities Act and Section 504 of the Rehabilitation Act, apply to postsecondary educational institutions and employers, the comprehensive and individualized provisions of IDEA—including the requirement of an IEP—do not. In colleges, for example, students will find higher expectations for independence and fewer opportunities for direct contact with faculty (Eckes & Ochoa, 2005).

In addition to ensuring that students and their families are fully informed of these differences, a balance must be struck between supporting students' current needs and preparing them for the more demanding environments that they will enter. Students' high school experiences should gradually be adjusted to fit what they will encounter in postsecondary activities (Jones, 2002; Stodden & Conway, 2002). To the extent possible, the transition planning process should reflect an assessment of the specific postsecondary education or workplace environments that the students will encounter.

***Early and active participation by students in transition planning.*** The transition process should begin early in high school and embody student-focused planning that enables them to participate actively in the process. Decisions should be based on the students' goals and interests. This process requires that students be provided with opportunities to become aware of options, to reflect on them in setting short- and long-term goals, and to assess the progress that is being made toward achieving their goals (Kohler & Field, 2003). During the transition process, students should work with a variety of individuals, including psychologists, general and special educators, administrators, counselors, and parents—and also reflect on their progress during the past year (Kohler & Field, 2003).

The transition services that students will receive must be documented each year in the IEP, beginning at age 16 (or younger if that is determined to be appropriate). In addition, under IDEA 2004, if a student whose eligibility for special education terminates due to graduation with a regular diploma or because he or she exceeds the age of eligibility, the school district must provide a summary of the student's academic achievement and functional performance, including recommendations on how to assist the student in meeting postsecondary goals. This "summary of performance" is vital documentation in the transition to postsecondary education and employment, under IDEA 2004 [section 614(c)(5)].

***Development of self-determination, self-advocacy, and other skills.*** When students with disabilities enter postsecondary education or employment, they will be expected to play an increased role in identifying necessary supports. This underscores the importance of including the development of self-determination and self-advocacy skills as part of the high school transition planning process (Kohler & Field, 2003).

Students with disabilities may also need to develop other educational, employment, and life skills. This should be done in both school-based and community settings and include identification of the accommodations or supports that students will need (Kohler & Field, 2003). Work experience, combined with postschool supports, academic skills, social skills, and job search skills, can improve employment outcomes (Benz et al., 1997; National Council on Disability, 2007). Kohler and Field (2003) noted that work experience and completion of student-identified transition goals were associated with high school graduation and employment.



*Family and community involvement in an inclusive transition planning process.* In addition to student participation, the transition planning process should also include parents and other family members, educators representing multiple disciplines (for instance, special and general education teachers, and school counselor), a transition specialist (Eckes & Ochoa, 2005), and community stakeholders such as employers with an interest in the transition planning (Kohler & Field, 2003; National Council on Disability, 2007). Family involvement can increase higher education attendance and assessment scores, improve students' self-esteem and confidence, and reduce dropout rates (Blackorby & Wagner, 1996). Additionally, Phelps and Hanley-Maxwell (1997) note that families' skills in coping with students' support needs will influence both progress towards educational outcomes and overall success in the adult community.

Family engagement can be enhanced by direct, routine communications such as face-to-face conferences, telephone contacts, open houses, teacher notes, and classroom visits (Kohler & Field, 2003). Practices that focus on family involvement—such as empowerment and training—facilitate family members' participation and increase their abilities to work effectively with others in the transition planning process (Kohler & Field, 2003).

*A coordinated, collaborative effort among community agencies.* Transition goals are more likely to be achieved when schools and communities build capacity together to serve students' transition needs (Benz et al., 1995; Devlieger & Trach, 1999). Kohler and Field (2003) and the National Council on Disability (2007) found that effective collaboration among organizations in the public and private sectors offers opportunities for individual students, while also addressing community issues that influence student services. Implementing an integrated system is instrumental in sustaining student-focused planning and student development practices, such as work experiences and student involvement in planning (Kohler & Field, 2003; National Council on Disability, 2007).

Effective collaborations, such as that between Milwaukee County's Division of Disability Services and the Milwaukee Public Schools, should be established with appropriate community agencies, including providers of transportation as well as rehabilitation and human services (National Council on Disability, 2007). These collaborations are especially important because students and parents may be unfamiliar with the terminology and operating procedures used by multiple adult-serving agencies. Hart, Zimbrich, and Whelley (2002) recommend that states and localities adopt student- and family-centered strategies that include:

- Interagency cooperation to coordinate services (including the use of transition specialists) and to streamline eligibility, intake, and referral procedures.
- Clear and uniform mechanisms for information sharing and communication across agencies, including Web-based information clearinghouses and use of accessible language that reflects cultural competence.
- Resource mapping and pooling of case management and other resources across disciplines.
- Identifying and addressing service gaps with input from students and their families.

*Appropriate use of technology.* There should be careful planning for the provision and/or transfer of technology, as needed. The transition process should include identification of funding sources for the technology, as well as timely training for students in the use of the technology (Mull & Sirlington, 2003).

## CONCLUSION

Policymakers and administrators face choices in structuring interventions to promote successful transitions from high school. A number of promising approaches are available to support students' preparation for the educational and workplace demands of the new economy. To maximize the effectiveness of these approaches, special attention should

be paid to increasing the rigor, relevance, and engagement of the high school curriculum, including for students who have traditionally faced barriers to successful postsecondary transitions.

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## ADDITIONAL RESOURCES

Extensive resources are available online for readers interested in more detailed discussion of the topics addressed in this Issue Brief. Among these resources are:

### Overview of the Transitions From High School

Bangser, M. (2008). *Evaluating the impact of strategies to promote successful transitions from high school*. Washington, DC: American Institutes for Research, National High School Center.

Lerner, J. B., & Brand, B. (2006). *The college ladder: Linking secondary and postsecondary education for success for all students*. Washington, DC: American Youth Policy Forum. Retrieved February 5, 2008, from <http://www.aypf.org/publications/The%20College%20Ladder/TheCollegeLadderlinkingsecondaryandpostsecondaryeducation.pdf>.

McDonough, P. M. (2004). *The school-to-college transition: Challenges and prospects*. Washington, DC: American Council for Education. Retrieved February 5, 2008, from [http://www.acenet.edu/bookstore/pdf/2004\\_IPtransitions.pdf](http://www.acenet.edu/bookstore/pdf/2004_IPtransitions.pdf).

The Pathways to College Network Web site. Retrieved February 8, 2008, from <http://www.pathwaystocollege.net>.

Editorial Projects in Education, Inc. (2007). Diplomas count: Ready for what? Preparing Students for college, career, and life after high school. *Education Week*, 26(40). Retrieved February 5, 2008, from <http://www.edweek.org/ew/toc/2007/06/12/index.html>.

### Resources for States

The American Diploma Project Web site. Retrieved February 8, 2008, from <http://www.achieve.org>.

The National Governors Association (NGA) and its Center for Best Practices and Honor States Program have produced Issue Briefs and other helpful materials, including:

Conklin, K. (2005). *Improving the high school-to-college transition through leadership and governance*. Retrieved February 5, 2008, from <http://www.nga.org/cda/files/0504HIGHSCHOOLTRANSITION.pdf>.

Conklin, K., & Smith, S. (2004). *Stronger fiscal incentives can improve high school and postsecondary outcomes*. Washington, DC: National Governors Association. Retrieved February 5, 2008, from <http://www.nga.org/Files/pdf/0407HIGHSCHOOL.pdf>.

Ewell, P., & Boeke, M. (2007). *Critical connections: Linking states' unit record systems to track student progress*. Washington, DC: Center for Higher Education Management Systems. Retrieved February 14, 2008, from [http://www.luminafoundation.org/publications/Critical\\_Connections\\_Web.pdf](http://www.luminafoundation.org/publications/Critical_Connections_Web.pdf).

National Governors Association. (2003). *Ready for tomorrow: Helping all students achieve secondary and postsecondary success*. Washington, DC: Author. Retrieved February 5, 2008, from <http://www.nga.org/cda/files/0310READY.pdf>.

National Governors Association Center for Best Practices. (2007). *Retooling career technical education*. Washington, DC: Author. Retrieved February 5, 2008, from <http://www.nga.org/Files/pdf/0706TECHED.PDF>.

The American Association of State Colleges and Universities provides a summary of state policies to strengthen high school curricula, from the perspective of the American Association of State Colleges and Universities:

The American Association of State Colleges and Universities Web site. Retrieved on February 8, 2008, from: [http://www.aascu.org/policy\\_matters/pdf/v3n7.pdf](http://www.aascu.org/policy_matters/pdf/v3n7.pdf).

### **Dual Credit/Dual Enrollment**

National Alliance of Concurrent Enrollment Partnerships Web site. Retrieved February 8, 2008, from <http://www.nacep.org>.

Community College Research Center at Teachers College of Columbia University Web site. Retrieved February 8, 2008, from <http://www.tc.columbia.edu/centers/ncpr>.

The Early College High School Initiative Web site, which is coordinated by Jobs for the Future. Retrieved February 8, 2008, from <http://www.earlycolleges.org>.

Middle College National Consortium Web site. Retrieved February 8, 2008, from <http://www.lagcc.cuny.edu/mcnc>.

The National Tech Prep Network Web site. Retrieved February 8, 2008, from <http://www.cord.org/ntpnr>.

### **Career and Technical Education**

The U.S. Department of Education's Office of Vocational and Adult Education funds both the National Research Center for Career and Technical Education and the National Dissemination Center for Career and Technical Education:

The National Research Center for Career and Technical Education Web site. Retrieved February 8, 2008, from <http://www.nccte.org>.

The Association for Career and Technical Education, which is dedicated to the advancement of education that prepares youths and adults for successful careers:

The Association for Career and Technical Education Web site. Retrieved February 8, 2008, from <http://www.acteonline.org>.

The California Center for College and Career ConnectEd Toolkit, with resources on how to connect academic and CTE instruction in a multiple pathways approach:

The California Center for College and Career ConnectED Toolkit Web site. Retrieved February 8, 2008, from <http://www.connectedcalifornia.org/toolkit/index.php>.

National Governors Association Center for Best Practices. (2007). *Retooling career technical education*. Washington, DC: Author. Retrieved February 5, 2008, from <http://www.nga.org/Files/pdf/0706TECHED.pdf>.

Meeder, H. (2008). *The Perkins Act of 2006: Connecting career and technical education with the college and career readiness agenda*. Washington, DC: Achieve, Inc. Retrieved February 8, 2008, from <http://www.achieve.org/node/984>.

### **Career Academies**

Career Academies Support Network offers comprehensive staff development and technical assistance for small learning communities and career academies:

Career Academies Support Network Web site. Retrieved February 8, 2008, from <http://casn.berkeley.edu>.

The National Career Academy Coalition, a national network of existing and emerging career academies:

The National Career Academy Coalition Web site. Retrieved February 8, 2008, from <http://www.ncacinc.org>.

The Association for Career and Technical Education Web site. Retrieved February 8, 2008, from: [www.acteonline.org](http://www.acteonline.org).

### **College Preparatory Programs**

The U.S. Department of Education has information on programs such as Upward Bound, Talent Search, and GEAR UP.

The U.S. Department of Education's Web site. Retrieved February 8, 2008, from [www.ed.gov](http://www.ed.gov).

The Advancement Via Individual Development College Prep Program Web site. Retrieved February 8, 2008, from <http://www.avidonline.org>.

### **Scholarship Incentive Programs**

The Lumina Foundation for Education has a number of helpful resources, including:

Davis, J. S. (2001). *Designing a state student grant program: A framework for policy-makers*. Indianapolis, IN: The Lumina Foundation for Education. Retrieved February 8, 2008, from <http://www.luminafoundation.org/publications/synopsis/studentgrantprogram.pdf>.

State Student Assistance Commission of Indiana, 21st Century Scholars Program Web site. Retrieved February 8, 2008, from <http://www.scholars.in.gov>.

Georgia Student Finance Commission, HOPE Scholarship Program Web site. Retrieved February 8, 2008, from <http://www.gsfc.org/hope>.

Oklahoma Higher Education Student Center Web site. Retrieved February 8, 2008, from <http://www.okhighered.org/student-center/financial-aid/grants.shtml>.

### **The Multiple Pathways Approach**

UCLA's Institute for Democracy, Education, and Access' Web site. Retrieved February 8, 2008, from <http://idea.gseis.ucla.edu/publications/mp/index.html>.

### **Transitions for Students With Disabilities**

National Transitional Longitudinal Study Web site. Retrieved February 8, 2008, from <http://www.nlts2.org>.

National Secondary Transition Technical Assistance Center Web site. Retrieved February 8, 2008, from <http://www.nsttac.org>.

National Post-School Outcomes Center Web site. Retrieved February 8, 2008, from <http://www.psocenter.org>.

ThinkCollege Web site. Retrieved February 8, 2008, from <http://www.thinkcollege.net>.

National Dissemination Center for Children with Disabilities Transition 101 Web site. Retrieved February 8, 2008, from <http://www.nichcy.org/resources/transition101.asp>.

[www.idea.ed.gov](http://www.idea.ed.gov) (see especially the section on secondary transitions)

National Collaborative on Workforce and Disability for Youth Web site, funded by the Office of Disability Employment Policy of the U.S. Department of Labor. Retrieved February 8, 2008, from: <http://www.ncwd-youth.info>.

Pacer Center Web site, especially for parents. Retrieved February 8, 2008, from <http://www.pacer.org/tatra>.



## ENDNOTES

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- <sup>1</sup> In this Issue Brief, the term “postsecondary education” refers to a range of activities including 2- and 4-year colleges as well as programs offering technical certificates, apprenticeships, and other advanced training.
- <sup>2</sup> Although this Issue Brief draws primarily on operating experience and studies of program implementation, the challenge of determining the actual impact of these interventions on improving postsecondary success is discussed in a companion Research Brief: Bangser, M. (2008). *Evaluating the impact of strategies to promote successful transitions from high school*. Washington, DC: American Institutes for Research, National High School Center.
- <sup>3</sup> Under the Individuals with Disabilities Education Act (IDEA) 2004, students with disabilities are supposed to start transition planning by age 16, although research suggests that this process should start even sooner (Weidenthal & Kochlar-Bryant, 2007).
- <sup>4</sup> Examples of primarily state-sponsored programs include Indiana’s 21st Century Scholars Program, Georgia’s HOPE Scholarships, and Oklahoma’s Higher Learning Access Program. Primarily privately-sponsored programs include Project GRAD and I Have a Dream. Scholarships also play an important role in federally funded programs such as GEAR UP.

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### Certification

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#### National Career Readiness Certificate benefits

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### National Career Readiness Certificate [NCRC]

Certify Your Workforce

- The NCRC is a credential that is used across all sectors of the economy and certifies the following cognitive skills:
  - Problem solving
  - Critical thinking
  - Reading and using work-related text
  - Applying information from workplace documents to solve problems
  - Applying mathematical reasoning to work-related problems
  - Setting up and performing work-related mathematical calculations
  - Locating, synthesizing, and applying information that is presented graphically
  - Comparing, summarizing, and analyzing information presented in multiple, related graphics

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Certify Your Workforce

- Individuals can earn the NCRC by taking three WorkKeys assessments
  - Applied Mathematics
  - Locating Information
  - Reading for Information

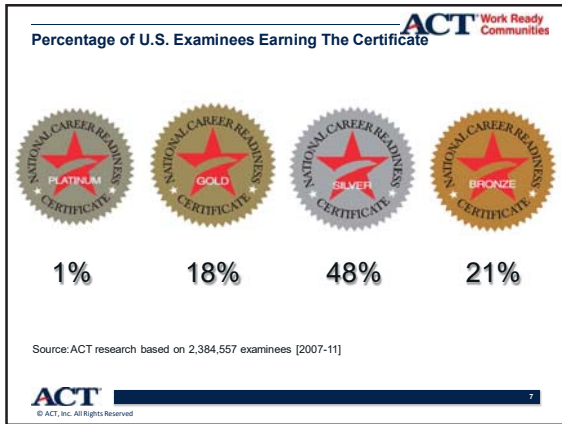
**80% of profiled jobs utilize all of these skills\***

\*Numbers are based on analysis of 5,618 jobs profiled from 2007 to 2011 in the ACT JobPro database.

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- ### Career Readiness in the United States 2015
- Career Readiness – the skills and proficiency levels needed for a specific career cluster
  - Policies and Practices to Increase Readiness
    - Implementing career readiness standards
    - Creating communities of work and career readiness
    - Implementing policies and practices for data driven decision making
- ACT Work Ready Communities

### 2020 Employment Projections with WorkKeys Scores

2018	A	B	C	D	E	F	G	H	I	J
2020 National Employment	11,203.1	5	5	5	43.8	18.1	10.1	10.1	10.1	10.1
Advertising and Promotions Managers	11,203.1	5	5	5	202.4	76.0	10.1	10.1	10.1	10.1
Marketing Managers	11,203.1	5	5	5	362.2	129.7	10.1	10.1	10.1	10.1
Public Relations and Fundraising Managers	11,203.1	5	5	5	72.1	27.9	10.1	10.1	10.1	10.1
Administration Services Managers	11,203.1	4	5	5	285.2	99.8	high school diploma or equivalent	10.1	10.1	10.1
Computer and Information Systems Managers	11,203.1	4	5	5	983.7	332.8	10.1	10.1	10.1	10.1
Financial Managers	11,203.1	6	5	5	373.4	142.8	10.1	10.1	10.1	10.1
Industrial Production Managers	11,203.1	5	5	5	164.0	69.0	10.1	10.1	10.1	10.1
Purchasing Managers	11,203.1	5	4	5	72.9	25.6	10.1	10.1	10.1	10.1
Transportation, Storage, and Distribution Managers	11,203.1	5	5	5	108.9	33.7	high school diploma or equivalent	10.1	10.1	10.1
Construction Managers	11,203.1	6	5	5	609.6	210.4	10.1	10.1	10.1	10.1
Education Administrators, Postsecondary	11,203.1	5	5	5	79.9	28.4	10.1	10.1	10.1	10.1
Education Administrators, Elementary and Middle School	11,203.1	5	5	5	299.9	89.7	10.1	10.1	10.1	10.1
Education Administrators, Postsecondary	11,203.1	5	5	5	274.0	88.3	10.1	10.1	10.1	10.1
Education Administrators, All Other	11,203.1	5	5	5	26.9	9.4	10.1	10.1	10.1	10.1
Architectural and Engineering Managers	11,203.1	6	5	5	192.0	69.7	10.1	10.1	10.1	10.1

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### ACT Career Readiness Benchmarks: Aerospace Career Cluster

**The Aerospace Career Cluster**

- Occupations in the aerospace career cluster constituted 18% of total occupational employment in the U.S. in 2012.
- Aerospace careers are projected to grow more than 9% from 2012-2022 with more than 7 million openings due to growth and replacement.

**Opportunities in the Aerospace Career Cluster**

Education Group	O*NET Code	Occupation Title	US Employment 2012	US Projected Employment 2022	Job Openings 2012-2022	Applied Mathematics (Range: 3-7)	Reading for Information (Range: 3-7)	Locating Information (Range: 3-6)
	51-2092	Team assemblers	1,031,800	1,081,300	212,000	3	4	3
	51-9061	Inspectors, testers, sorters, samplers, & weighers	464,300	490,000	127,900	4	4	4
	51-4041	Mechanics	397,300	432,400	125,800	4	4	4
	51-4021	Computer-controlled machine tool operators, metal & plastic	140,300	180,700	59,800	4	4	4
	51-2011	Aircraft structure, surfaces, rigging, & systems assemblers	41,500	41,000	5,300	3	4	4
	51-2011	First-line supervisors of production & operating workers	394,700	584,300	83,700	4	4	4
	49-3011	Aircraft mechanics & service technicians	121,700	124,700	35,600	5	5	5

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### Targets for Instruction

Teaching the skills necessary for workplace success

Education and business need help. Use Targets for Instruction—downloadable documents available for each WorkKeys assessment—made a easier to create curricula and instructional strategies for the areas measured by WorkKeys.

Use the Targets for Instruction to:

- Identify skill levels of competencies and learning objectives
- Select developmental materials that match specific WorkKeys skill levels
- Estimate skill levels of materials you currently use
- Bridge the education and business communities together by using WorkKeys as a common language

WorkKeys Targets for Instruction are available for each WorkKeys assessment skill area, and they include:

- Skill building strategies
- Sample work-based tasks and problems for each level
- Guidelines for obtaining and using workplace materials
- A detailed description of each WorkKeys skill area and level

Also, combine the Targets for Instruction with job profiling for an integrated approach to career planning and workplace training.

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Carrick  
Carter  
Cheatham  
Claiborne  
Clay  
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Columbia  
Cumberland  
DeKalb  
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**ACT** National Center  
Business Certificate

NCCF LEVELS

- + Platinum 70
- + Gold 25,450
- + Silver 42,374
- + Bronze 22,404

TOTAL: 90,298

JOB PROFILES COMPLETED: 884

EMPLOYERS SUPPORTING: 200

NCCF Data 01-01-2004 - 04-30-2016

Community approach that links education and workforce development aligns to economic development and matches people to jobs

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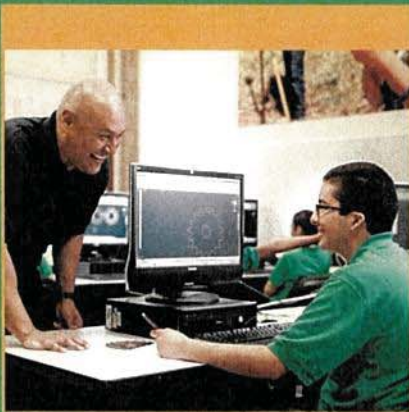
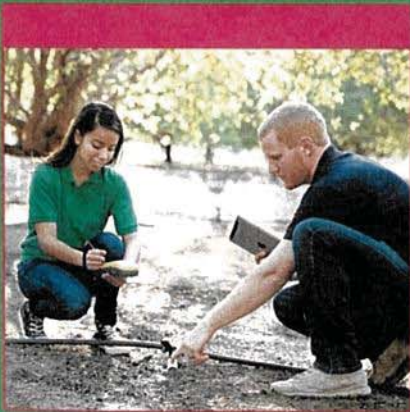
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JOBS FOR THE FUTURE

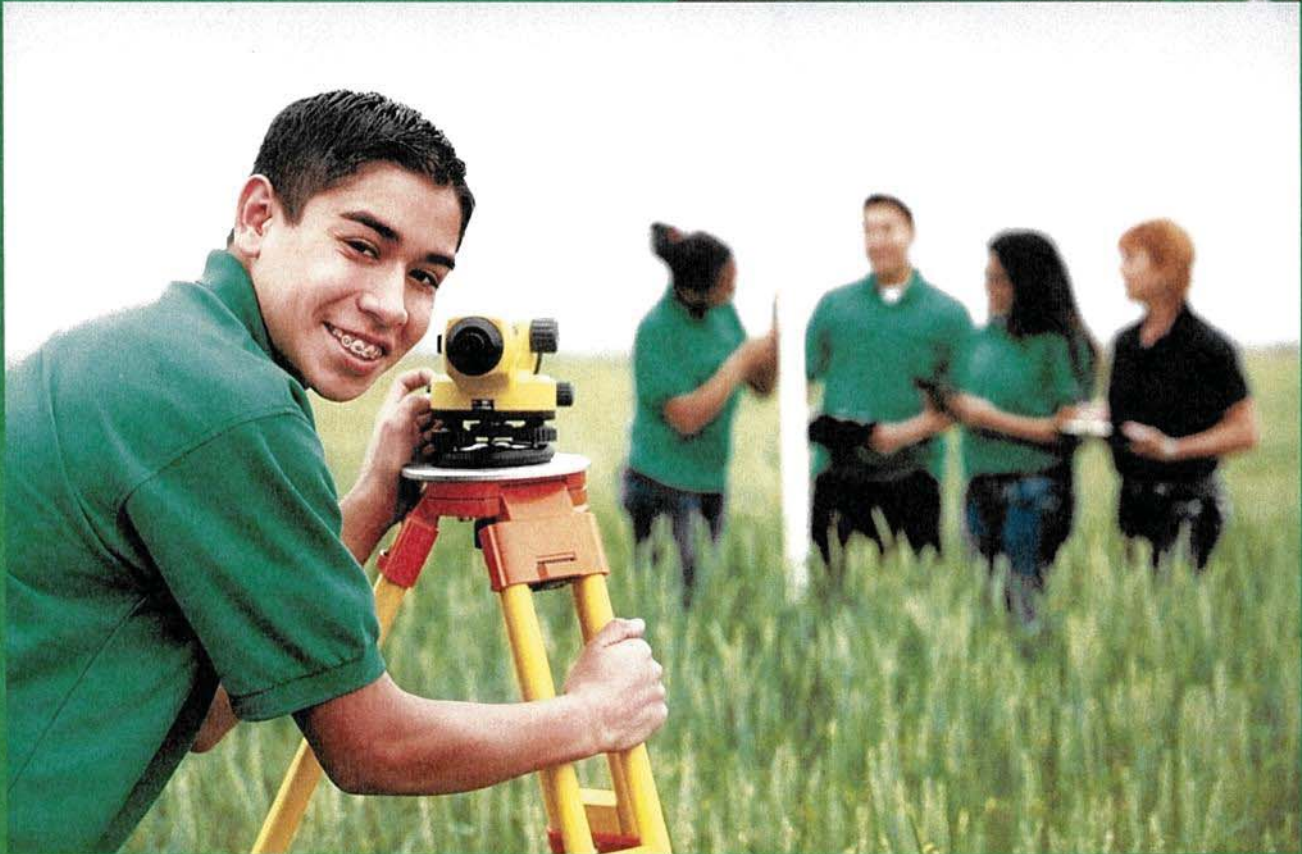
# College and Career Success in the Central Valley



How PACA (the Paramount Agriculture Career Academy)  
is Changing the Educational Experience for Students

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# College and Career Success

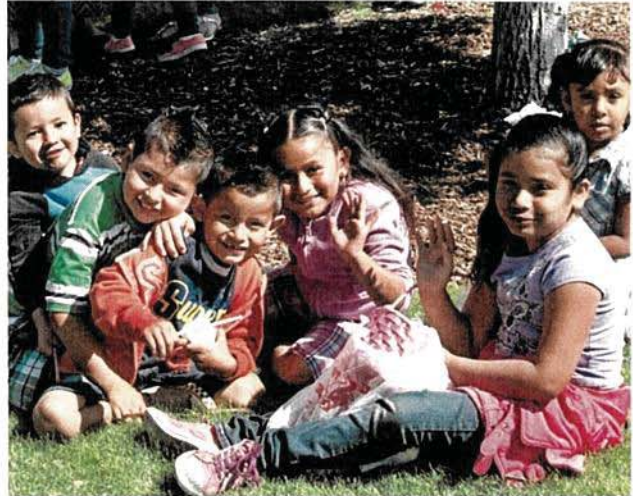
in the Central Valley

How PACA (the Paramount Agriculture Career Academy)  
is Changing the Educational Experience for Students

Thad Nodine







Tucked away in California's Central Valley, among golden hills and green orchards, are the towns and cities where families lay down roots. Like other communities across America, these are towns where parents volunteer in schools, churches, and county fairs. Families attend harvest festivals and soccer games. Children dream of becoming firefighters, astronauts, farmers, teachers, and scientists.

Household income in the San Joaquin Valley is below the state average. Poverty rates are higher. But employment is on an upswing and most of the jobs are in agriculture. In McFarland, a welcome sign beckons: "The Heartbeat of Agriculture." A few miles north, a larger sign greets motorists near Delano:



The vacancies are in career positions with high starting salaries that can support a family. They represent only a few of the many openings at Paramount Agricultural Companies. Yet despite these job openings, communities throughout the Valley are experiencing double-digit unemployment. The jobless rate among teens in Kern, Kings, and Fresno counties hovers around 37%. Many young people have to leave the Valley to seek employment.

**It's called the skills gap**—the mismatch between the many good jobs available and the lack of skilled young workers who are qualified for them. Agriculture has become a high-tech industry with careers from science and engineering to business administration, but education in the Valley has not caught up.

**The challenge?** Not enough youth in the Valley are being prepared for college and careers.

## The PACA Promise

The Paramount Agriculture Career Academy (PACA) is a regional partnership that increases college and career success among youth in the lower San Joaquin Valley, from Bakersfield to Fresno. The partnership brings together high schools, community colleges, agriculture production and processing companies, and Paramount Education Programs (PEP), which provides planning and management support. Currently, PACA is targeting four communities: Avenal, Delano, McFarland, and Sanger.

**The Vision:** To prepare youth in the San Joaquin Valley for college and career success—and advance tomorrow’s agricultural, business, science, and technology leaders.

**The Work:** To create a fundamental change in the educational experience, so that more high school students are engaged in a rigorous, relevant curriculum that gives them direct experience in college classes, agricultural careers, and work-based learning.

**The Model:** PACA combines (1) an “early college” model that provides a rigorous academic program of study with substantial college credits while in high school; and (2) a career academy with three agriculture-themed pathways—including work-based learning opportunities—that lead directly to well-paying, mid-level career positions in agriculture.



*“This is about college AND careers for youth in the Central Valley. It’s not either/or. We’re making college relevant and we’re showing that agriculture is innovative, interesting, and cool.”*

— Lynda Resnick

Founder, Paramount Agricultural Companies

### The PACA Model:



## The Pathway Programs

High school partners provide community colleges with classrooms, facilities, teachers, access to students, and student supports. Community college partners provide certificate and degree programs, college credits, oversight, instructors, and student supports. Paramount and other agricultural companies provide guidance in aligning curriculum with industry standards, collaboration on skills mapping, guest speakers, job shadowing, mentorships, internships, and externships.

### HIGH SCHOOLS

Avenal High School

McFarland High School

Paramount Academy (Delano)

Sanger High School

### COMMUNITY COLLEGES

& West Hills

& Bakersfield

& Bakersfield

& Reedley

### CERTIFICATE OR AA DEGREE

> Plant Science

> Agricultural Mechanics

> Agricultural Business Management

> Plant Science and Agricultural Mechanics



PACA's partners for the 2014–15 school year include four high schools and their school districts (Avenal High School, McFarland High School, Sanger High School, and Paramount Academy, a charter school); three community colleges (Bakersfield, Reedley, and West Hills); and six major agricultural companies (POM Wonderful, Paramount Citrus, Paramount Farming, Paramount Farms International, Grimmway Farms, and Olam International). The program will grow each year as incoming classes enroll. By 2018, at least 200 high school students will be earning their associate degrees or technical certificates in agriculture annually.

The pathway programs feature three fields that are in high demand in the Central Valley, that pay well, and that lead to promising careers: agricultural business management, agricultural mechanics, and plant science.

All partners have committed financially to the PACA model, including substantial resources and facilities by schools and community colleges, and commitments for paid internships from partnering agricultural companies. In addition, PACA receives funding from Lynda and Stewart Resnick (founders of Paramount Agricultural Companies and of parent company Roll Global LLC), the California Career Pathways Trust (including critical startup costs such as professional development), and other sources.

## Why PACA Came Together

California's \$45 billion agriculture industry has become more high-tech, specialized, and innovative, with job openings that require a higher level of skills and knowledge compared to a decade ago. Meanwhile, the pipeline of college graduates in the Valley is too small, so many entry-level skilled positions remain unfilled. Many mid- and high-level managers are nearing retirement, without enough young prospects to step into leadership positions.

Skills gaps have been reported as a national phenomenon, and the San Joaquin Valley is no exception. In the Valley, the skills gap is caused by several factors, including:

- Schools and colleges are not preparing enough youth for entry-level career positions in agriculture.
  - High school dropout rates in the San Joaquin Valley are higher than the state average. College-going rates are lower, especially for four-year degrees. The share of residents with a bachelor's degree is much lower in the Valley (16 percent), compared to the state as a whole (31 percent).
  - The agriculture industry has not marketed itself well as a viable choice for innovative, high-tech work.
- Most youth are unaware of the wide range of well-paying careers in agriculture. There's a common—but inaccurate—saying in some circles: "If you don't study in school, you'll end up in agriculture." The truth is that even high school graduates do not qualify for many jobs in today's agriculture industry.
  - Many young people seeking college and careers move away from the Valley, not knowing that there are dynamic career opportunities near their hometowns.

*"Farming has changed. Whether you want to contribute to plant research as a scientist, build sustainable food sources for your community, make irrigation more efficient, or specialize in the mechanics of packing plants—that's all agriculture."*

— **Carole Goldsmith**  
President, West Hills College

## Illustrating the Skills Gap, 2014

348

The number of job openings for entry-level, skilled positions annually at Paramount Agricultural Companies alone.

100%

The percentage of those jobs that call for a college certificate or degree. About 84% of the job postings ask for a certificate or an associate degree. About 16% prefer a bachelor's degree.

38%

The percentage of openings that remains unfilled annually due to a lack of qualified applicants. Many jobs that are filled go to under-qualified candidates who require substantial training.

1,000

The estimated number of agricultural employers in the region. About one of five jobs in the Valley is provided by agriculture.

Source: Paramount Education Programs (PEP), 2014.

## The PACA Model

PACA is unique in drawing from several successful approaches to education reform, while also offering guaranteed paid internships in the agriculture industry.

### 1. Early College Curriculum and Supports

PACA integrates college courses and student supports into the high school curriculum—so that all students earn at least 53 college credits while in high school, and many will earn an associate degree in science for transfer (AS-T, 60 credits). All college credits are free of charge and will be transferable to a four-year university, thereby fast-tracking students' college experience and resulting in major savings for families. PACA's early college approach (see sidebar) is designed to increase college success particularly among low-income youth, first-generation college students, English language learners, students of color, and other young people underrepresented in college. PACA prepares students for college by immersing them in a structured program of college classes and providing them with intensive supports to ensure their success.

At PACA's partnering high schools, the curriculum is aligned with the Common Core and with entry requirements for the University of California (UC) and California State University (CSU) systems, so that all graduates are fully prepared for four-year colleges. (The AS-T degree guarantees admission at CSU as a junior.) The curriculum focuses on science, technology, and mathematics—through hands-on projects, work-based learning, and other instructional methods that draw from the experiences and work of the Central Valley. In addition, students earn a specialized certificate in agriculture and/or an associate of science degree, which provides them with job mobility and increases their chances of pursuing and earning a bachelor's degree.

High school coursework builds toward the college courses, which are taught on high school campuses by partnering community college instructors. High schools provide most of the intensive, wraparound support, including mandatory summer schools, mandatory

## PACA Context: Early College High Schools

PACA goes beyond many early college programs by also infusing career pathways and guaranteed internships into its approach. Over the past decade, more than 280 schools serving over 80,000 students across the U.S. have developed early college programs. Recent outcomes show:

- **High school graduates:** 90% of early college students receive a diploma, compared to 78% of students nationally.
- **College degrees:** 30% of early college students earn an associate degree or a certificate with their diploma, compared to very few students nationally.
- **College credits:** 94% of early college students earn college credits in high school, compared to 10% of students nationally.
- **College enrollment:** 71% of early college graduates enroll in college right after high school, compared to 54% of low-income graduates nationally.
- **College persistence:** 86% of early college graduates who enroll in college stay for their second year, compared to 72% of college students nationally.

Source: M. Webb and C. Gerwin, *Early College Expansion* (Boston: Jobs for the Future, 2014).

*“Coming here and knowing they would pay for college classes—it took a load off my parents.”*

— PACA student



interventions, academic tutoring, and dedicated college and career counseling. Partner community colleges select and oversee the college instructors, determine the requirements for certificates and degrees, and ensure the quality of the courses and degree programs—as they would at their own campuses. They also provide tutoring for the college classes, with experienced college students sitting in lectures with PACA students and then helping them with their assignments.

## 2. Career Academy Focused on Agriculture

PACA integrates its early college curriculum with a career-academy approach that has proven effective in increasing student preparation for college and careers (see sidebar). In particular, PACA builds from the California Partnership Academy (CPA), which is structured as a school within a school. PACA creates **small learning communities** of students who are immersed in rigorous high school and college coursework along **career pathways** that lead directly to certificates, degrees, and mid-level career positions in agriculture. In addition, PACA offers a wide range of **work-based learning** opportunities that include paid internships with Paramount and other agricultural companies.

**Small learning communities.** As a career academy, PACA focuses on a cohort (or small group) of students at each high school who commit to the academy and who share teachers, classes, and other experiences. A team of math, science, English, and career-technical teachers (in agriculture) is assigned to teach the courses, to meet with each other and

*“This is a game changer for a lot of reasons, particularly Paramount’s commitment for internships and jobs. There’s no better way to get kids involved than experience and a paycheck.”*

— David East

Superintendent, Reef-Sunset Unified School District

## PACA Context: Career Academies

PACA goes beyond traditional career academies by also infusing early college and other features into its approach. The number of career academies in the U.S. has grown substantially over the past two decades, to about 7,000 academies in 2010, with about one million high school students enrolled. Studies have shown a wide range of benefits associated with career academies, including:

- Better attendance, more credits earned toward graduation, increased grade point averages, and better retention through high school.
- Lower need for remediation in college.
- Higher earnings over eight years after high school.

Source: David Stern et al., *Career Academies: A Proven Strategy to Prepare High School Students for College and Careers* (Berkeley: Career Academy Support Network, UC Berkeley, 2010).

with students regularly, and to share decision-making about curriculum and instruction. Partnering community college instructors teach college courses—including classes in general education and agriculture—that are aligned with the high school’s early college curriculum and supports.

**Career pathways in agriculture.** In integrating high school and college coursework, PACA also immerses students in a rigorous academic program of study within three agriculture-themed pathways. The pathways were selected because they are in demand in the Central Valley, they pay well at the entry level and beyond, and they lead to innovative, promising careers. Students earn an associate degree and/or a technical certificate in agriculture by the time they graduate from high school—free of charge.

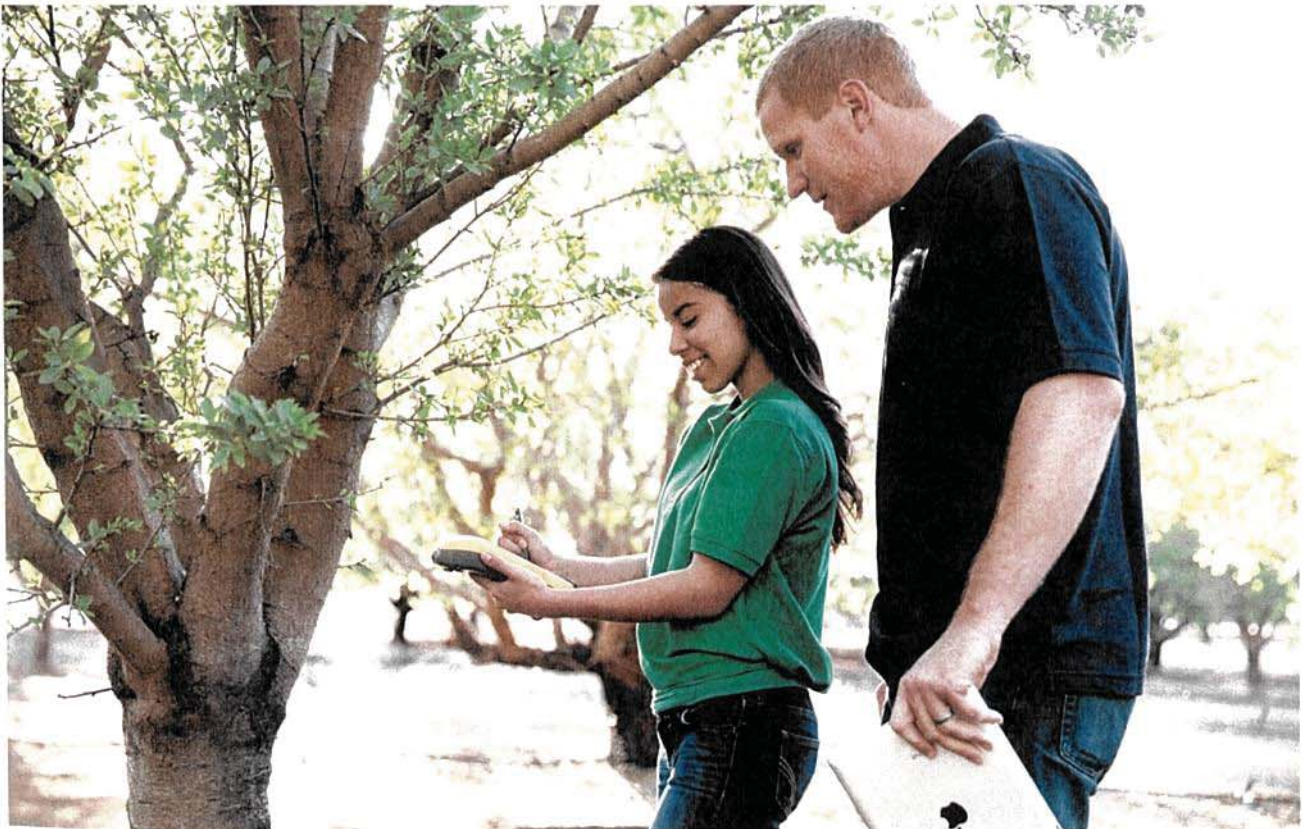
The three pathways are:

- **Agricultural business management.** Students apply principles and technical skills in human resources, purchasing, storing, inspecting, marketing, and selling agricultural products. Average annual income: \$75,198 plus benefits.
- **Agricultural mechanics.** Students focus on skills, knowledge, and training needed for equipment repair, machine operators, maintenance (for example, welding and plumbing), and general administration. Average annual income: \$56,907 plus benefits.
- **Plant science.** Students study the theories, principles, and practices involved with the production and management of food and soil conservation, including irrigation and pest management. Average annual income: \$35,350 for technicians, \$69,493 for scientists plus benefits.

**Work-based learning.** PACA works closely with high school teachers, college instructors, and agricultural companies to integrate work-based learning skills and opportunities into the high school and college curriculum. This includes hands-on, interdisciplinary projects across math, science, and English courses focusing on agricultural themes. PACA guarantees paid internships to every participating twelfth-grade student who fulfills the program's requirements. The internships are aligned with the student's pathway and build on classroom activities. PACA also provides guest speakers, job shadowing, and mentorships related to the agricultural themes being studied. Instructors are provided with externships, shared planning time, and industry visits to help develop relevant projects that are aligned with learning objectives and instructional strategies.

*"We got to see the almond production, how they shake the almonds, clean them, and dry them. We got to see how the irrigation process works. We saw how they package the products. . . It gave us a hands-on opportunity to see what agriculture is all about."*

— PACA student



## The PACA Experience: What PACA Means for Students

In 2014–15, PACA has 232 participants, all of whom are freshmen (see PACA Snapshot). Enrollments will increase with each incoming class over the next few years. The regional collaborative will expand to several additional high schools in 2015 and 2016, as well as to middle schools that serve as feeder schools for the high schools.

PACA is in its inaugural year, but it is already transforming—and ramping up—educational programs for students. The following components illustrate some of the key changes that PACA is bringing to high schools.

### School is ~~Out~~ **IN** for Summer

At partnering high schools, PACA students participate in mandatory summer sessions prior to each school year—and all the summer sessions feature college courses. In 2014–15, each incoming freshman completed a college success course, for which they earned their first college credit. They entered high school as successful college students.

The four-week summer program in 2014–15 also exposed incoming freshmen to rigorous English and math classes, many of which infused agriculture themes into interdisciplinary projects. At Avenal High School, for example, a summer project focused on water conservation. In English class, students completed research and wrote about themes related to water use and conservation. In math, they used statistics and

## Academy Participants

PACA targets all students who want to pursue college and career goals while in high school. Participating students volunteer for the academy and, along with their parents, must commit to the program's rigorous requirements, such as summer school, after-school interventions, college course-taking, and leadership activities.

PACA participants reflect the demographics of their high schools. About 82 percent of PACA students receive free or reduced-cost school lunch, 50 percent are English learners, and 92 percent are from minority ethnic or racial groups. Less than a third (31 percent) of incoming PACA freshmen are at grade level in math, and about 40 percent are at grade level in English.

Source: Paramount Education Programs (PEP), 2014.

projections to estimate various rates of rainfall, irrigation, and household uses over time. In a computer class, they presented their findings through videos and other formats.

**Summer Camps for Middle School Students.** PACA also works to ramp up expectations and opportunities for younger students in the Valley. For example, PACA provides weeklong overnight camps on college campuses for rising eighth graders in the areas served by PACA's high school partners. At the camps, students experience college firsthand by staying in dorms for

### PACA Snapshot: Enrollment, 2014–15

HIGH SCHOOL	STUDENTS ENROLLED	MALE	FEMALE
Avenal	58	23	35
McFarland	35	21	14
Paramount Academy	63	30	33
Sanger	76	38	38
Total	232	112 (48%)	120 (52%)

Source: Paramount Education Programs (PEP), 2014.



the week and participating in hands-on activities that feature work-based learning. They visit orchards and processing facilities, and talk with field managers and line experts. They witness the power of simulations in surveying and in computer-aided design (CAD). They work with farm machinery and tools, including welding and fabricating. And they see the bigger picture—how the farm operates as a business. From these experiences, they get a firsthand look at a wide range of cutting-edge careers in agriculture. In summer 2014, over 200 rising eighth graders participated in residential camps held by West Hills College, Coalinga; Reedley College; and Bakersfield College.

## Shared Vision and Goals

PACA students have already shared a range of experiences together: summer school, college visits, college classes, and visits to agricultural production plants. They also share the same groups of classes and teams of teachers, which gives them a strong community and support system at their schools. The teachers assigned to the academy meet together to plan instructional strategies and supports. For students, the sense of community also derives from a shared purpose; PACA helps them visualize how each class leads to their college and career goals. “That makes a difference in terms of motivation and engagement,” said Juan Ruiz, principal at Avenal High School. “They know how it all fits together.”

*“It’s true rigor because the students are preparing for college classes much earlier than they traditionally would. We know that our students are college-ready because they’re taking and passing college courses.”*

— Saúl González

Executive Director, Paramount Academy



## Academic Rigor and High Expectations

The high school partners have revised their four-year course sequence and have gone well above the school's graduation requirements to make sure all PACA students enroll in, and pass, the a-g course requirements needed for enrollment in the University of California (UC) and California State University (CSU) systems. Courses are also being revised to ensure that students are prepared for their college coursework. For example, partnering high schools are requiring PACA students to take integrated agricultural biology as freshmen, a course that covers their biology requirement and provides them with content knowledge in science and agriculture they will need for college courses in their agriculture pathways. Most high schools in California schedule biology classes for sophomore year.

## College Classes

At each high school, incoming PACA students completed their first college class in summer 2014, and are taking two college classes during the 2014–15 school year (one each semester). As sophomores, the students will take at least two college courses during the year, depending on the high school they attend (see table, next page). Juniors and seniors will enroll in at least four college courses each year. Students also earn college credits each summer. The college courses are challenging academically, but the high schools provide substantial supports.

*“The main difference [with the college course] is you have to study on your own... If you really want to understand what she's teaching, you have to read the chapters and take notes on your own.”*

— PACA student



## Schedule of College Classes at the High Schools Leading to AS-T Degree, by Career Pathway

Students earn college credits, free of charge, toward an associate degree in science for transfer (AS-T, 60 credits). All participating students are expected to complete the following college courses.

	Paramount Acad. + Bakersfield CC	Avenal HS + West Hills CC	Sanger HS + Reedley CC		McFarland HS + Bakersfield CC
<b>Grade</b>	<b>Ag Business Management</b>	<b>Plant Science</b>	<b>Plant Science</b>	<b>Ag Mechanics</b>	<b>Ag Mechanics</b>
<b>Summer</b>	Microsoft Office	Ag Applications to Computers	Ag Applications to Computers	Ag Applications to Computers	Microsoft Office
<b>9<sup>th</sup></b>	Nutrition	Health	Health	Health	Nutrition
	Spanish 1	Spanish 1	Spanish 1	Spanish 1	Spanish 1
<b>Summer</b>	Art Appreciation	Art Appreciation	Spanish 2	Spanish 2	Art Appreciation
<b>10<sup>th</sup></b>	World History Ag Sales and Comm. Ag, Environment, and Society Intro Ag Business	Intro Plant Science Tractor Operation	Plant Nutrition Pesticides	Construction Tech. Welding 1	Mechanized Ag Ag Safety
<b>Summer</b>	Public Speaking	Psychology	Public Speaking	Physical Education	Public Speaking Physical Education
<b>11<sup>th</sup></b>	Ag Leadership Intro Plant Science Intro Chemistry U.S. History	California Water Weeds and Plants Communications U.S. History	Plant Science Plant Propagation and Production Art Appreciation U.S. History	Electricity and Hydraulics Small Gas Engines Art Appreciation U.S. History	Ag Leadership Small Gas Engines Welding Processes U.S. History
<b>Summer</b>	American Gov't.	American Gov't.	American Gov't.	American Gov't.	American Gov't.
<b>12<sup>th</sup></b>	Ag Internship Ag Economics Macro Economics English Comp. Intro Literature Statistics	Ag Internship Ag Economics Pest Management Critical Thinking Intro Chemistry Statistics	Ag Internship Ag Economics Critical Reasoning General Chemistry Statistics	Ag Internship Ag Economics Welded Structures Machinery Tech. Public Speaking Statistics	Ag Internship Welded Structures Farm Diesel Repair Farm Power Ops. Ag, Environment, and Society Statistics
<b>Post-High School</b>	[No additional credits needed to complete AS-T]	Soils English Comp.	Soils English Comp.	Soils English Comp.	Soils English Comp.

Note: Only college courses are included above; high school classes are not included. High school science classes include ag biology, chemistry, and physics. High school math classes include pre-calculus or calculus.

## Interdisciplinary Projects with Ag Themes

One of PACA's promises is to make education relevant—which can help students achieve the rigor that is required by connecting academic topics to work-related themes. During the summer, PACA teachers from all the high schools met for a weeklong training session, where they worked by subject across high schools—and within high school teams across subjects—to develop interdisciplinary ag-related themes. The instructional planning continued throughout the semester. At Sanger High School, for example, English teachers have been meeting with ag and science teachers and integrating the themed learning into the English language arts standards. As the biology teacher covers a unit on ecology, water usage, and conservation, the English teacher is assigning students to write about water rights and the history of irrigation. Meanwhile, the ag instructor is teaching a related module on crops and pollution. At each of the schools, students create at least one substantial interdisciplinary project each semester.

The joint instructional planning requires schools to create times when PACA teachers can meet with each other regularly, such as common planning periods during school and on short days. It also requires teachers to find time to talk and exchange ideas informally, such as weekly lunch sessions and via email.

## Technology-Infused Instruction

The number-one skill that incoming mid-skilled agricultural employees need, according to executives at Paramount Agricultural Companies, is computer aptitude. That's why PACA schools provide each participating student with his or her own laptop, tablet, or other device, and it's why they integrate computer and software use into everyday assignments and projects—to prepare every student for 21st-century learning and workplace environments. PACA students not only submit homework electronically, but also work on drafts and presentations online (through Google Docs, YouTube and other platforms), so they can access projects

*“This project brings everyone together to make sure students walk out in four years prepared for college and with skills that can help them be employed now. They’ll know how to adapt and problem-solve. They’ll know the language and the math of agriculture, of business. They’ll be able to walk onto a job site and know what people are talking about and be able to contribute.”*

— Jonathan Delano

PACA Coordinator, Sanger High School

online across multiple classes, and work in teams to edit and supplement each other's work. Students also learn to use software appropriate for their agricultural pathways, such as Global Positioning System (GPS), computer-aided design (CAD), geographic information system (GIS), analytic software, and surveying.

In addition, many PACA students enter high school below grade level academically. Providing students with their own laptop or tablet and requiring them to complete their work online allows PACA schools to track student progress readily, identify student needs or trouble areas quickly, and provide personalized interventions and supports to help the students succeed in their rigorous courses.

## Increased Student Supports

From summer school to after school, PACA students are receiving additional tutoring and other supports to help them succeed academically. PACA teachers at each school are providing additional supports to help students with their more rigorous courses. For example, college courses are typically offered two or three days per week; during the off-days, PACA teachers and college tutors

help students master the material. Paramount Academy has an extended day (from 8 a.m. to 4:30 p.m.) for all students, and has set aside a study hall period daily for PACA students. During that time, students work on their high school and college homework and have access to a dedicated teacher for assistance.

Each of the high schools is also providing tutoring and support through its own programs, such as after-school homework assistance and Advancement Via Individual Determination (AVID). For example, Sanger High School provides “push-ins” and “pull-outs.” In push-ins, an “intervention teacher” goes into specific classes—such as math or science—to work during the class period with students who are having difficulties. In pull-outs, students who are identified as struggling are pulled out of an elective in order to help them with math or English. Avenal High School provides a half-hour SMART period (Students Maximizing Achievement, Responsibility, and Time) daily, during which students work on their homework directly with a teacher.

Students at partnering high schools also have access to dedicated counselors who identify students who need help, plan appropriate interventions, and address issues that arise with college courses and instructors on the high school campus. Eventually, the partnering colleges will train students who have passed the college courses to provide tutoring to the high school students. In addition, all the high schools are hiring or have hired a coordinator to manage PACA programs at the school and to facilitate communications and student interactions with partnering community colleges and industry. This will be particularly important when students begin their more extensive interactions with job shadowing and internships.

*“This is a way different experience... Now I study about 4 to 5 hours a day for my high school and college classes.”*

— PACA Students

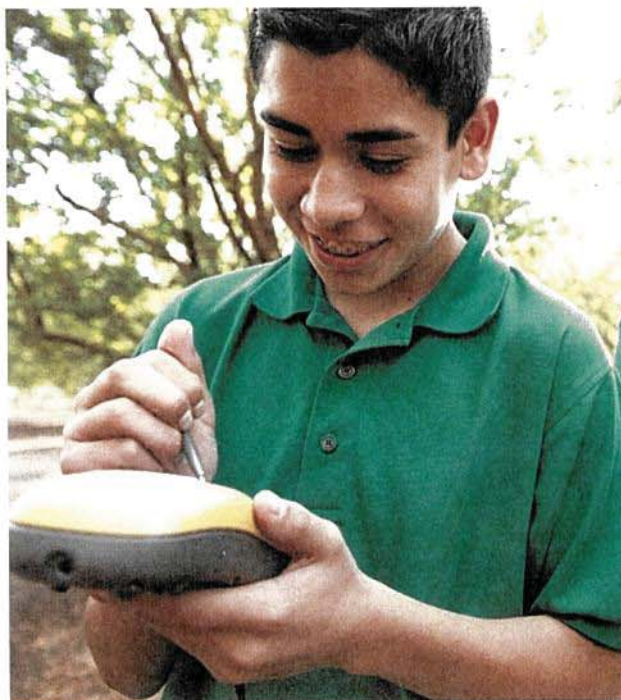
*“What I see is the excitement in students’ eyes, when they see how this program is a fit for them, how it gives them opportunities right now. When their eyes light up, I get excited, too.”*

— Juan Ruiz

Principal, Avenal High School

## A Different Daily Schedule

To accommodate college coursework, most of the schools are implementing a daily class schedule that features longer blocks of time, similar to a college schedule. Avenal High School has changed all classes to a block schedule in which students have different classes on different days. In comparison, McFarland High School has created “a block schedule embedded within the regular school schedule,” said Principal Lori Schultz. At McFarland, periods 1 and 2 are joined for PACA students, so that the longer college classes can be taught during that combined period. Any extra time is used to provide additional supports and tutoring for students.



## How PACA Came Together

One of the unique aspects of PACA is its independent status yet its close connections to schools, colleges, and the agricultural industry in the Central Valley. PACA is a regional partnership that grew from long-standing efforts by Paramount Agricultural Companies—and their parent company, Roll Global LLC—to invest in and improve the education of youth in California's Central Valley.

Paramount has been providing jobs and contributing to communities in the Valley for over 30 years. With its extensive investments in the Valley—including over 20 million fruit and nut trees—the company is here to stay, providing long-term, sustainable employment. The work has been guided by Lynda and Stewart Resnick, founders of Paramount Agricultural Companies and Roll Global. In education, their vision has been consistent: to promote better opportunities for young people in the Valley—through supporting early childhood education, parent engagement, college scholarships, college and career readiness, and other programs. PACA deepens that work by bringing together public schools, community colleges, and industry—while also changing youth attitudes about college, careers, and agriculture.

*“It’s a win-win for everybody. It’s the right thing to do for our industry, for our communities, for families, and for youth in this valley.”*

— **David Krause**

President, Paramount Citrus

By early 2013, Paramount Academy, a charter school in Delano, California, had already developed an early college model to support students in earning college credits while in high school. The school's four-year college-going rate for its first graduating class was 48%, which was about three times higher than that of local high schools. During the school's charter-renewal

## Timeline: Leading the Way to PACA

By working with school, college, and industry leaders to provide high school students with college credits and career experiences, PACA offers a prototype for educational change—in the Central Valley and nationally.

### 1994

Paramount Agricultural Companies begin providing large numbers of college scholarships to high school students, as part of their philanthropic support for Central Valley communities.

### 1997

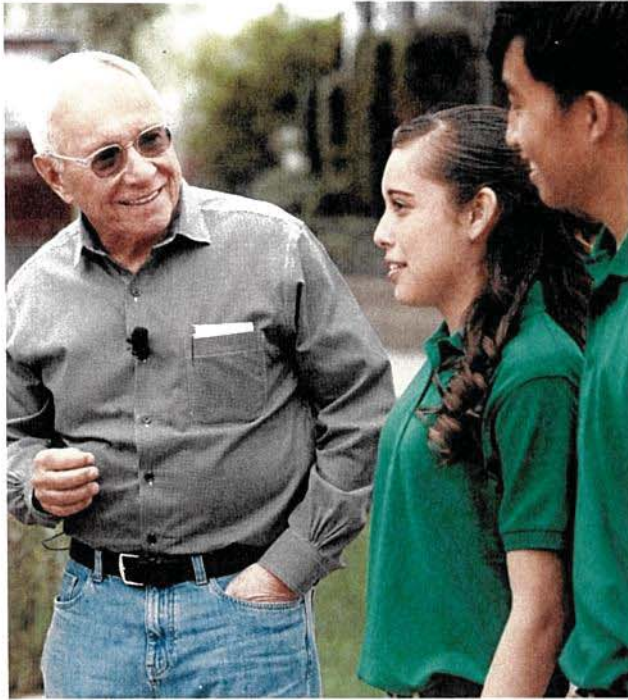
Paramount Education Programs (PEP) is created by Paramount Agricultural Companies to expand their educational contributions and impacts. PEP provides grants to public schools across the Central Valley and funds summer camps, arts education, early childhood programs, college scholarships, and other school programs for students and families.

### 2009

Paramount Academy, a charter school, opens in Delano to increase college-going among Central Valley youth. Paramount Academy, which is supported by Paramount Agricultural Companies, currently serves about 650 students in grades 6 to 12. The school offers an early college model integrated with two pathways: liberal arts and agriculture.

### 2013

Paramount Agriculture Career Academy (PACA) is created as a regional partnership to provide sustainable opportunities for college and career success in the Central Valley. PACA builds on the work of PEP, the Paramount Academy, public schools and colleges in the region, and industry to integrate an early college curriculum with career pathways and work-based learning in agriculture.



*“As a leader in the agriculture industry, we’re building a runway to help teens get from high school to college and into career positions. If we can do it, others can too.”*

— **Stewart Resnick**

Founder, Paramount Agricultural Companies

process, Paramount Academy worked to strengthen its early college model by featuring an agriculture pathway and laying out a more aggressive sequence of college course-taking in high school. PEP and the charter school also expanded its work-based learning components, including job shadowing and internships with Paramount Agricultural Companies.

PACA was formed in 2013 to expand the early college and career-pathways approach beyond the charter school and into several traditional public schools and community colleges in the San Joaquin Valley. PACA already had strong support from industry and it had connections in public schools where PEP had already been distributing grants for some years. As a result, PEP’s first step in developing PACA was to reach beyond these partnerships to approach community colleges in the region. According to Noemi Donoso, senior vice president of education initiatives at Roll Global, “West Hills College was the first to sign on and create a career pathway in plant science with Avenal High School. Their vision and commitment helped to bring other colleges to the table to fill the skills gap and increase educational opportunity in the region.”

Soon thereafter, partnerships were created with McFarland High School and Bakersfield Community College, and with Sanger High School and Reedley Community College. In 2014, PACA applied for a grant from the California Career Pathways Trust, which it received in the summer of that year. The grant provided the partnership with increased support and impact. Around the same time, PACA brought together instructors from the partnering high schools and colleges for training and planning.

Having industry commitment from the start helped PACA expand. In interviews, high school and college leaders said that the participation of the Paramount Agricultural Companies, in backing the project and providing internships, was crucial in helping the school districts and colleges gain support for the substantial changes now underway. They also said they would not have been able to take on the scope of this project without the vision and planning that the PEP team provides. For example, Jonathan Delano, assistant principal and PACA coordinator at Sanger High School, said that PEP continues to bring to the table important contacts that help provide perspective about the work, practical examples of other schools that have launched similar projects, and a vision as to where this can go. He said

that as a result of PEP's strategic support, "we're not trying to recreate the wheel. Our job is to connect all those possibilities to what will work on the ground, for our students."

Over the next years, PACA partners will gather to analyze how well students are performing in the program, meet regularly to discuss and compare findings, and make adjustments along the way. Substantial changes in the educational experiences of students appear to be

underway, but the depth and scope of the transformations will take time. As Sandra Caldwell, president of Reedley College, said, "At the end of the day, our largest purpose is to create systemic economic change in the Central Valley. We approach that purpose through our work to create pathways to college and careers—to get a whole group of students involved in a college-going culture, which will lead to better completion in college and to work opportunities as well."

*"Education is here to multiply options exponentially,  
to where each student is not only receiving  
a rigorous and relevant education, but also their  
horizons are expanding every year."*

— **Saúl González**

Executive Director, Paramount Academy





## **Jobs for the Future**

Jobs for the Future works to ensure economic opportunity for all. Our innovative college and career pathway models give those struggling to succeed access to needed knowledge, skills, and credentials. We partner with education, workforce, and business leaders to understand the labor market and design systems to sustain a pipeline of skilled workers. We advocate with policymakers for state and federal policies to support this work.

## **Paramount Agricultural Companies**

Paramount Agricultural Companies is a group of privately owned, affiliated businesses that comprise the largest farming operation of tree crops in the world. Paramount Farms is the largest vertically integrated pistachio and almond grower and processor in the world. Paramount Citrus is the largest integrated grower, packer and shipper of fresh citrus in the U.S. These operations, which are located in California's Central Valley, are also affiliated with the worldwide leader in fresh California pomegranates and various pomegranate-based products. Paramount's products can be found in the produce aisles of grocery stores nationwide under popular retail brands, including Wonderful Pistachios, Wonderful Almonds, Wonderful Halos and POM Wonderful. Paramount is part of Roll Global, a privately held, \$4 billion international company that offers healthy, iconic brands for healthy lifestyles. For more information, go to [www.roll.com](http://www.roll.com).

## **Paramount Education Programs**

Paramount Education Programs (PEP) is an innovative educational program that is driving positive change in California's Central Valley. As a philanthropic extension of the Paramount Agricultural Companies, PEP funds a host of college and career readiness programs to promote opportunities for young people in California's Central Valley. PEP initiatives include college and career readiness, college scholarships, school grants, summer school programs, arts education, early childhood programs, teacher development and parent engagement. PEP coordinates directly with the Paramount Agricultural Companies to offer a sequence of rich work-based learning experiences for all Paramount Agriculture Career Academy students, including paid internships.



**JOBS FOR THE FUTURE**

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# Appendix IV: Other State Reports



MASSACHUSETTS  
Department of  
Higher Education

## Massachusetts Definition of College and Career Readiness

*Approved by Massachusetts Board of Elementary and Secondary Education on February 26, 2013; Massachusetts Board of Higher Education on March 12, 2013.*

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### Overview

Massachusetts students who are college and career ready will demonstrate the knowledge, skills and abilities that are necessary to successfully complete entry-level, credit-bearing college courses, participate in certificate or workplace training programs, and enter economically viable career pathways. In order to meet this goal, the Commonwealth has defined a set of learning competencies, intellectual capacities and experiences essential for all students to become lifelong learners; positive contributors to their families, workplaces and communities; and successfully engaged citizens of a global 21<sup>st</sup> century.

Beyond achieving college and career ready levels of competence in English Language Arts / Literacy and Mathematics, all high school students should develop a foundation in the academic disciplines identified in the MassCore course of study,<sup>1</sup> build competencies for workplace readiness as articulated in the Integrating College and Career Task Force Report,<sup>2</sup> and focus on applying academic strategies to problem solving in diverse professional and life contexts, appropriate to individual student goals. Massachusetts will use its 2011 curriculum frameworks,<sup>3</sup> which include the Common Core State Standards, as the basis for an educational program that provides students with the academic knowledge, skills and experiences that are essential to postsecondary educational, career, and personal success.

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### Essential Competencies

#### *Learning*

Students who are college and career ready in English Language Arts / Literacy will demonstrate the academic knowledge, skills, and practices necessary to enter into and succeed in entry-level, credit-bearing courses in College English Composition, Literature, or technical courses; certificate or workplace training programs requiring college-level reading and writing; or a comparable entry-level reading and writing course at the institution. College and career ready students in English Language Arts/ Literacy will be ***academically prepared*** to:

- Read and comprehend a range of sufficiently complex texts independently
- Write effectively when using and/or analyzing sources

- Build and present knowledge through research and the integration, comparison, and synthesis of ideas
- Use context to determine the meaning of words and phrases

Similarly, students who are college and career ready in Mathematics will demonstrate the academic knowledge, skills, and practices necessary to enter into and succeed in entry-level, credit bearing courses in College Algebra, Introductory College Statistics, or technical courses; certificate or workplace training programs requiring an equivalent level of mathematics; or a comparable entry-level math course at the institution. College and career ready students in Mathematics will be ***academically prepared*** to:

- Solve problems involving the major content with connections to the mathematical practices
- Solve problems involving the additional and supporting content with connections to the mathematical practices
- Express mathematical reasoning by constructing mathematical arguments and critiques
- Solve real world problems, engaging particularly in the modeling practice

Successful achievement of specified levels of competence in English Language Arts / Literacy and Mathematics will be required for students to be placed into entry-level courses in college or participate in certificate or workplace training programs without the need for remediation.

### ***Workplace Readiness***

Student preparation for college and career should emphasize career awareness, exploration and immersion as well as development of the foundational knowledge and skills necessary to successfully navigate the workplace. College and career ready students will demonstrate:

#### **Work Ethic and Professionalism**

- Attendance and punctuality expected by the workplace
- Workplace appearance appropriate for position and duties
- Accepting direction and constructive criticism with a positive attitude and response
- Motivation and taking initiative, taking projects from initiation to completion
- Understanding workplace culture, policy and safety, including respecting confidentiality and workplace ethics

#### **Effective Communication and Interpersonal Skills**

- Oral and written communication appropriate to the workplace
- Listening attentively and confirming understanding
- Interacting with co-workers, individually and in teams

Proficiency in these skills is common for success in all workplaces and should be viewed as the foundation upon which additional workplace and career skills are added based on the specifics of any job.

### ***Qualities and Strategies***

Preparation for college and career should help students develop a wide range of quantitative and qualitative abilities that go beyond the minimum levels of competence needed for entry-level college courses and employment. In high school, students should demonstrate:

- Higher order thinking skills of analysis, synthesis, and evaluation
- The ability to think critically, coherently, and creatively
- The ability to direct and evaluate their own learning, be aware of resources available to support their learning, and have the confidence to access these resources when needed.
- Motivation, intellectual curiosity, flexibility, discipline, self-advocacy, responsibility, and reasoned beliefs

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Together these attributes provide the framework for college and career readiness and support educational and workplace success as well as serve as the basis for being an active participant in our democracy.

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<sup>1</sup> [MassCore](#) is a rigorous and comprehensive four year course of high school study recommended by the Commonwealth as preparation for college and career. MassCore is also the vehicle through which high school students can gain competence in computational, scientific, visual, creative, and critical thinking and can engage opportunities for “hands-on” application and exploration of new areas of knowledge and experiences.

<sup>2</sup> See [ICCR Task Force Report](#)

<sup>3</sup> See current [Massachusetts Curriculum Frameworks](#).

## Background

### Development of Massachusetts Definition of College and Career Readiness

In September 2010 Massachusetts came together with 22 other states in the nation to form the [Partnership for Assessment of Readiness for College and Career \(PARCC\)](#). PARCC consortium states are working together to develop a common set of K-12 assessments in English language arts/literacy and mathematics aligned to the Common Core State Standards and anchored in what it takes to be ready for college and careers. The new assessments will help build a pathway to college and career readiness by the end of high school, track students' progress toward this goal, and provide teachers with timely information to inform instruction and provide student support. These next-generation assessments will also send clear signals to students about their readiness for postsecondary coursework while they still have time to address any gaps. In addition, the entire effort is designed to lead to better alignment between higher education and K-12 with regard to a definition of college readiness.

Higher education and elementary and secondary education in the PARCC states are collaborating closely in developing the PARCC assessments. Working together at the national level, representatives of the two sectors developed a structure by which both sides have an equal voice in deciding key matters affecting the character of the assessments—such as the underlying definition of college and career readiness—that affect both higher education and K-12. Each PARCC state, including Massachusetts, committed to developing structures within their states that would similarly engage both sectors in close collaboration, information sharing and decision making.

During the spring and summer of 2011, the Massachusetts Departments of Elementary and Secondary and Higher Education worked together to develop an engagement structure for the Commonwealth that would afford meaningful input and deliberation on the PARCC work—starting with defining college and career readiness—from education stakeholders at the local, regional and statewide levels. The structure included the provision that major policy decisions on key matters related to the PARCC assessments would be brought to the Board of Higher Education and the Board of Elementary and Secondary Education. Massachusetts hosted a statewide launch conference for this work in October 2011.

In December 2011, Richard Freeland, Commissioner of the Massachusetts Department of Higher Education, and Mitchell Chester, Commissioner of the Massachusetts Department of Elementary and Secondary Education, initiated two related “readiness activities” in the P-16 community. Commissioner Freeland requested that all public college and university presidents establish Engagement Teams on each campus, bringing together faculty and staff with P-12 teachers and school/district leaders, and that these Teams collaborate in the development of a shared definition of college readiness for Massachusetts by organizing discussions at the local level and through the Regional Readiness Centers.



During the spring of 2012 the P-16 Campus Engagement Teams, collaborating with over 500 P-16 educators, developed statements on college readiness which, while distinctive in style and language, shared a focus in three interrelated areas—a set of core academic competencies; cognitive skills and strategies; and dispositions and habits of mind. The Engagement Teams also urged support for a Massachusetts definition that would encompass all high school students' preparation for their postsecondary paths by addressing both college and career readiness. By June 1, 2012, the 25 institution presidents submitted their [P-16 Campus Engagement Team reports on defining college readiness](#).

In December 2011, the Board of Elementary and Secondary Education (BESE) appointed a 36-member task force of business, education, and community leaders to develop recommendations on better integrating college and career readiness into K-12 education. The Integrating College and Career Readiness Task Force (ICCR), chaired by BESE member Gerald Chertavian, included Commissioner Freeland and other representatives from higher education as members. The Task Force was charged to identify: "power" standards (knowledge and skills) inherent in a core career development education program; indicators of career readiness, including student assessments; and policies and programs that provide multiple pathway options to integrate knowledge and skills for career and postsecondary education readiness; as well as to adopt a clear, measurable definition of career readiness.

The ICCR Task Force defined career readiness as follows: "Career readiness means an individual has the requisite knowledge, skills and experiences in the academic, workplace readiness and personal/social domains to successfully navigate to completion an economically viable career pathway in a 21st century economy." The [ICCR Task Force Report](#) was presented to the Board of Elementary and Secondary Education on June 26, 2012.

The definitions developed and submitted by the P-16 Campus Engagement Teams and the ICCR Task Force in the spring of 2012 stated clear support for the integration of college and career readiness in Massachusetts' work to develop a shared statewide definition. The readiness perspectives of the Engagement Teams and ICCR Task Force were synthesized and a draft Massachusetts definition was prepared for review by a statewide 14-member coordinating council co-chaired by Commissioners Chester and Freeland and comprised equally of P-12 and higher education representatives. A draft definition of college and career readiness reflecting the council's feedback was circulated among education, business and community groups during the summer of 2012. Of more than 1360 survey participants who responded by October 2012—47% from higher education, 48% from P-12 and 5% other—more than 80% supported the draft definition. In November, the statewide coordinating council convened to finalize the shared draft definition and to recommend its consideration by the Board of Elementary and Secondary Education and the Board of Higher Education.

Massachusetts' draft definition conveys that a high school graduate who is "college and career ready" is a student prepared, on a college path, to enroll in entry-level, credit-

bearing college courses without the need for remediation; and on a job and career path, to participate in certificate training programs and workplace training programs.

The definition also builds upon the Commonwealth's focus on English language arts and mathematics as the specific academic areas that will be assessed by PARCC and then used in the postsecondary environment to help determine readiness for—or placement into—entry-level, credit-bearing courses. Thus, Massachusetts' definition of college and career readiness is designed to link to the Commonwealth's future K-12 assessment instruments and higher education placement policy for English language arts and mathematics.

Finally, the definition is based on the foundation that students will have developed consistent, challenging, intellectual growth, in all subject areas, throughout their high school program as a result of the full implementation of the [Massachusetts Curriculum Frameworks](#) (which include the Common Core State Standards) and the [MassCore](#) recommended course of study. Underpinning Massachusetts' definition of College and Career Readiness are all of the Commonwealth's P-12 teaching and learning policies that address students' diverse learning challenges and support the abilities of all students' to learn and achieve.

## College and Career Readiness a summary of state approaches

### Alabama: Prepared 2020

- Prepared graduate definition: “Possesses the knowledge and skills needed to enroll and succeed in credit-bearing, first-year courses at a two- or four-year college, trade school, technical school, without the need for remediation. Possesses the ability to apply core academic skills to real- world situations through collaboration with peers in problem solving, precision, and punctuality in delivery of a product, and has a desire to be a life-long learner.”
- By 2020, increase number of students who are college- and career-ready as measured by receiving: 1) a benchmark score on any section of the ACT test, 2) a qualifying score on an AP or IB exam, 3) approved college or postsecondary credit while in high school, 4) a benchmark level on the ACT WorkKeys, 5) an approved industry credential OR 6) documented acceptance for enlistment into the military. Baseline: 70% 1-year target: 72% 4-year target: 78% 5-year target: 80%

### Alaska: Preparing college, career, and culturally ready graduates

- **Personalized learning and career plans (PLCP)** for all students (grades 6-12)
- 1.5% increase of K-12 foundation funding for CTE
- **DOLWD CTE Plan Implementation Grant Funding:** since FY2012, the Alaska legislature has provided \$625,000 annually for implementation of the CTE Plan through competitive grants to school districts, postsecondary institutions, and non-profit organizations, to enhance existing CTE programs or implement new ones. These grants include a requirement for business partners to be involved, as well as requiring all grant-funded programs to implement Personal Learning and Career Planning, an important foundation of the CTE Plan.
- **Technical Vocational Education Program (TVEP)** funding has been reauthorized through 2017. Non-competitive grant funds are part of a statewide vocational training system, working together with industry and state agencies to provide a comprehensive and unified response to Alaska's training needs.
- **Alaska Education Tax Credit:** Alaska provides a tax credit to businesses that make charitable contributions to support schools and fund educational facilities and programs for Alaska's next generation. The tax credits offset taxes due for the Alaska Net Income Tax (corporate), mining license tax, fisheries business tax, fishery resource landing tax, oil and gas production tax, oil and gas property tax, and insurance tax.

### Arizona

- **College and career ready definition:** demonstrate strong literacy, numeracy, communication, and technology skills, demonstrate cultural competency, demonstrate strong critical thinking and reasoning skills, become artistically literate, be physically literate, articulate career and post-secondary goals, and are civic minded.
- **Strategy for measuring success of definition**
  - Postsecondary Engagement: Enrollment in postsecondary programs without the need for remediation indicates success along the entire pre-K through twelve continuums. By June 30, 2016, implement the state accountability transition plan and the ESEA waiver to meet state

and federal requirements.

- Identify the percent of students in grades 3 through 8 who are on track to be College and Career Ready, as indicated by passing AzMERIT/NCSC in English Language Arts (ELA) and Math.
- Identify the percent of students in grade 12 determined to be College and Career Ready as indicated by passing all 6 required AzMERIT or NCSC end of course assessments in ELA and Math by August 1, 2018.

## Arkansas

- **Smart Core Standards:** Arkansas' college- and career-ready curriculum for high school students. College and career-readiness in Arkansas means that students are prepared for success in entry-level, credit-bearing courses at two-year and four-year colleges and universities, in technical postsecondary training, and in well-paid jobs that support families and have pathways to advancement.
- **College and Career Coach Model (piloted in 2013-15, state-wide implementation in 2015):** to significantly increase the number of underrepresented students who enter and remain in postsecondary education; knowledge of and participation in apprenticeships, and exposure to all forms of postsecondary career trainings and certifications.
  - Community colleges [apply for funding](#) to hire and train a coach as a new administrative/instructional position that works with students within a particular region.
  - Funded through multiple sources: federal grants (TANF, College Challenge Access, & Workforce Investment Act); school districts (National School Lunch Act and Carl D Perkins Career and Technical Education Act); non-profit support (Winthrop Rockefeller Foundation)

## California

- **California Career Pathways Trust:** \$500 million in total funding from the California legislature in the past two consecutive budget acts (2014, 2015).
  - Provides new or expanded sequenced pathways of integrated academic and career-based education and training, aligned to current or emerging regional economic needs, designed to lead students to a postsecondary degree or certification in high-skill, high-wage, and high-growth fields. The overarching goal of this program is to build and sustain robust partnerships between employers, schools, and community colleges in order to better prepare students for the 21st century workplace and improve student transition into postsecondary education, training, and employment.
- **Defining College and Career Readiness: Standards for Career Ready Practice**
  - Developed to describe the fundamental knowledge and skills that students need to prepare for transition to postsecondary education, career training, or the workforce. These standards are not exclusive to a career pathway, a career technical education (CTE) program of study, a particular discipline, or level of education.
  - Standards for Career Ready Practice are taught and reinforced in all career exploration and preparation programs or integrated into core curriculum, with increasingly higher levels of complexity and expectation as a student advances through a program of study.

- **Defining College and Career Readiness:** CTE Model Curriculum Standards (2013) that incorporate the integration of career technical and academic education

## Colorado

- **Postsecondary Workforce Readiness Description:** "Colorado high school graduates demonstrate the knowledge and skills (competencies) needed to succeed in postsecondary settings and to advance in career pathways as lifelong learners and contributing citizens." (Adopted Winter 2016)
- **2009 Concurrent Enrollment Programs Act (\$450,000 for the 2015-16 fiscal year)**
  - The act created the concurrent enrollment program, defined as the simultaneous enrollment of a qualified student in a local education provider and in one or more postsecondary courses, including academic or career and technical education courses, which may include course work related to apprenticeship programs or internship programs, at an institution of higher education.
  - The collective intent is to broaden access to and improve the quality of concurrent enrollment programs, improve coordination between institutions of secondary education and institutions of higher education and ensure financial transparency and accountability.
  - Beyond coordinating and clarifying the existing concurrent enrollment programs, the bills also created the "5th year" [ASCENT program](#) for students to continue participating in concurrent enrollment for one year following their 12th grade year.

## Connecticut

- **Student Success Plan:** individualized student-centered plan that engages every student based on their unique interests and strengths helping them to understand the relevancy of education to achieve postsecondary educational and career goals. The SSP will begin in Grade 6 and continue through high school. It will provide the student support and assistance in setting goals for academic, career, social, emotional, and physical development that meet rigorous high school and postsecondary expectations. The SSP and supporting activities, such as student portfolios, experiences outside the classroom, dual concurrent credit, along with academic/personal records should be electronic and portable following the student from school to school and district to district. **(Public Act No. 11-135, April 2012)**

## Delaware

- **Innovation grants (capped at \$500,000):** developed to award funds through the Reserve Fund under the provisions of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 P. L. 109-270 [Section 112 & 135] to eligible recipients for the purpose of implementing and improving secondary Career and Technical Education (CTE) programs of study. Priorities are aligned with Section 135 and the Delaware State Plan for CTE, which includes the following:
  - Support the implementation of new Delaware state-model CTE programs of study;
  - Enhancement grants for Delaware state-model CTE programs of study;
  - Prepare students for continuing education and career success; and
  - Provide professional development for CTE instructors, administrators, and school counselors.

## Florida

- **Career and Professional Education (CAPE) Innovation Courses**
  - (piloted in select districts AY 2014-15, 2015-16)
  - A new type of course which combines academic and career content with performance expectations that will result in college credit (through AP) and industry certification attainment.
  - According to the statutory framework, each approved CAPE Innovation Course must have at least two third-party assessments, one of which must be associated with an industry certification on the CAPE Industry Certification Funding List.

## Georgia

- **Georgia PathWorks: The Career Preparation Pipeline**
  - Currently evaluating career, technical, and agricultural education pathways. Aligning and adjusting current initiatives to their “birth to career pipeline”
    - Create Georgia PathWorks website
    - Develop 6 full pathways by July 2016 that support the birth to career pipeline
    - Asset mapping one target region through town hall meetings.
- **High Demand Career Initiative**: aligning CTE goals to the Georgia governor’s plans for workforce development.

## Hawaii

- **New Skills for Youth Grant (2016)**: Secured \$100,000 grant to evaluate CTE in the state and develop new, robust career pathways for Hawaiian students

## Idaho

- **Fast Forward Program (2016)**: The Fast Forward program provides every student attending an Idaho public school an allocation of \$4,125.00 to use towards Advanced Opportunities in grades 7-12. The program was expanded by the Legislature in 2016 through the passing of [House Bill 458](#). The fund can be used for overload courses (courses that are taken outside of normal school hours and beyond the full course load offered by the school), dual credit courses, and AP/IB/CLEP/PTE exams

## Illinois

- **Work Experience and Career Exploration Program**: Funded for \$1,793,658 to provide a one- or two-year school-to-work transition program designed for students ages 14 and 15 who are at risk of dropping out of school.
- **Project Lead the Way at The University of Illinois**: Brings early exposure of engineering concepts to students in high school, providing the path to more formal engineering preparation in institutions of higher education or the path to technologically oriented jobs. The project provided \$100,000 for training and professional development for those who teach this core group and engineering-oriented courses in Illinois high schools. In FY14, approximately 175 Illinois high school teachers attended training and/or professional development.

- **Special Populations Leadership Project:** Provides \$275,000 (with \$150,000 of this amount devoted to nontraditional students per Perkins legislation) for statewide professional development and technical assistance to educators for the improvement of instructional services for special populations in CTE with an emphasis on the recruitment and retention of students preparing for a nontraditional career field.
- **SIU Curriculum Revitalization Project:** Provides \$635,000 in professional development opportunities and technical assistance to career and technical educators in Illinois through the development and dissemination of revitalized CTE curriculum in all content areas, curriculum research and planning in each of the approved content areas, and up-to-date technology support to deliver innovative and effective resources

## Indiana

- **New Skills for Youth Grant (2016):** Secured \$100,000 grant to evaluate CTE in the state and develop new, robust career pathways for Indiana students

## Iowa

- **CTE Redesign: Learning That Works For Iowa (House File 2392, May 2016)**
  - The initiative focuses on ways to continue building Iowa's talent pipeline and close the skills gap so that more Iowans have quality career opportunities and employers have the skilled workforce they need. This [legislation](#) will help achieve the Future Ready Iowa goal that 70 percent of Iowans in the workforce have education and training beyond high school by 2025.

## Kansas

- **College and career ready definition:** "an individual has the academic preparation, cognitive preparation, technical skills and employability skills to be successful in post-secondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remediation." (2015)
- **Governor's CTE Bill (2012)** provides tuition reimbursement for high school students enrolled in college-level CTE courses [incentivizing high school students](#) graduating with an industry-recognized certifications that lead directly to high-demand occupations in Kansas through a certification incentive program, transportation reimbursement to school districts transporting high school students off-campus to complete college-level CTE coursework.

## Kentucky

- **Tech Ready Apprentices for Careers in Kentucky (TRACK):** a youth pre-apprenticeship program is a partnership between the Kentucky Department of Education's Office of Career and Technical Education and the Kentucky Labor Cabinet to provide secondary students with career pathway opportunities into Registered Apprenticeship programs.
- **Equitable Funding Study for CTE**
  - Kentucky hired a private firm to analyze the funding for CTE programs, generating a [report](#) and recommendations on how to create an equitable funding scheme for CTE.

## Louisiana

- **Jump Start Program:** a [new paradigm for career and technical education](#) (CTE), requiring students to attain an industry-promulgated, industry-valued credential in order to graduate high school.
  - Schools will receive a 6% addition to the amount the state allocates per student for students enrolled in technical courses.
  - There is a minimum allocation of \$25,000 per school district or \$10,000 per charter/special school. Read more about qualifying courses and the funding [here](#).

## Maine

- No new initiatives other than the federal Perkins grant.

## Maryland

- **Maryland Work-Based Tax Credit:** offers a [tax credit to employers](#) for approved, paid work-based learning programs for students that provide a structured employer supervised learning experience.

## Massachusetts

- **Workplace Education [Planning Grant](#):** designed to encourage partnerships among education providers, business partners and unions (where the workforce is unionized) to deliver contextualized instructional services to meet the needs of employers and the incumbent worker students.

## Michigan

- **Michigan Works!:** Grant program started in 2014 to assist Michigan companies in training their workers at local community colleges. The governor has set aside \$10 million for a Skilled Trades Training Fund to provide technical training for employees in other positions within their organizations.
- Governor allocated \$250,000 in the budget this year for an independent study on the Career Readiness System in Michigan

## Minnesota

- **Planning for Students' Successful Transition to Postsecondary and Employment:** Legislation requires all students starting in 9th grade to have a Personal Learning Plan. This plan should include academic scheduling, career exploration, 21st century skills, community partnerships, college access, all forms of postsecondary training, and experiential learning opportunities. This [guide](#) provides resources in all eight required areas, as well as strategies and partnerships that can help implement this directive.

## Mississippi

- No new initiatives other than the federal Perkins grant.



## Missouri

- **Project Lead The Way (PLTW)**
  - Offers a dynamic high school program that provides students with real-world learning and hands-on experience. Students interested in engineering, biomechanics, aeronautics, biomedical sciences and other applied math and science arenas will discover PLTW is an exciting portal into these industries.
  - PLTW offers a pre-engineering program that offers 6 courses at the high school level, a biomedical sciences program, and a middle school program that exposes students to a broad overview of the field of technology.
  - Grants for funding these programs are offered directly through PLTW

## Montana

- Legislature allocated \$1 million over FY 2012-2014 to enhance student access to career and technical student organizations by increasing the staffing capacity of the six state organizations and providing financial support for student activities.

## Nebraska

- No new initiatives other than the federal Perkins grant.

## Nevada

- **College and Career Readiness Competitive Grant (2015):** the Nevada Department of Education (NDE) was required to set aside funds to support College and Career Readiness programs through a competitive grant process. The intent of these grants is:
  - to create a competitive Science, Technology, Engineering, and Mathematics (STEM) grant programs for students enrolled in middle school and high school in order to become college and career ready;
  - to increase participation in Advanced Placement (AP) courses and increase the AP success rates for high school students;
  - to increase and expand dual enrollment programs for students enrolled in high school, including charter schools, and simultaneously enrolled in college courses.
- Part the Governor's education policy package with investments totaling \$300 million over two years.

## New Hampshire

- No new initiatives other than the federal Perkins grant.

## New Jersey

- **New Skills for Youth Grant (2016):** Secured \$100,000 grant to evaluate CTE in the state and develop new, robust career pathways for New Jersey students.

## New Mexico

- No new initiatives other than the federal Perkins grant.

## New York

- **Career Development Occupational Studies (CDOS) Graduation Pathway Option:** The New York State Board of Regents approved regulations establishing multiple, comparably rigorous assessment [pathways to graduation for all students](#).
  - Multiple pathways recognize the importance of engaging students in rigorous and relevant academic programs. The recently approved regulations recognize students' interests in the Arts, Biliteracy, Career/Technical Education, Humanities and Science, Technology, Engineering and Mathematics (STEM) by allowing an approved pathway assessment to meet the students' graduation requirements.
- **NYS CDOS Commencement Credential:** The NYS CDOS Commencement Credential is a credential recognized by the NYS Board of Regents that certifies a student has the standards-based knowledge and skills necessary for entry-level employment.

## North Carolina

- No new initiatives other than the federal Perkins grant.

## North Dakota

- **[Grants for Innovation \(\\$56,000; 2016-17\)](#):** provide new, innovative science, technology, engineering or innovation programs for students in kindergarten through grade twelve with preference given to projects involving robotics competition.
- **[STEM Innovation and Integration Matching Grant \(\\$143,925; 2016-17\)](#):** encourage business and industry partners to participate in and contribute to STEM activities in K-12 education that innovates and integrates STEM methodologies into existing or new programming.
- **[Students Preparing for Nontraditional Fields \(\\$9,000 per district; 2016-17\)](#):** encourage students to access a full range of occupational choices regardless of gender.

## Ohio

- **CTE Senior Only [Credential Program \(Starting 2018\)](#):** Many seniors have limited course work the last year of high school. This initiative allows districts to implement industry-recognized credential programs to meet the needs of districts and students, as well as provide business and industry partners with a skilled workforce. Learn more [here](#)

## Oregon

- **Regional STEM Hub Program Expansion Grant:** intended to continue to build capacity and address the urgency to address student academic success in CTE and STEM education through programs and activities that have been identified through a needs assessment and gap analysis
- **CTE Revitalization Grant:** established in 2011 through HB 3362. The grants are used to enhance collaboration between education providers and employers to revitalize new or existing CTE programs of study. Grants are awarded each biennium, and were funded at \$9 million during the 2015 Oregon Legislative Session.

## Pennsylvania

- **CTE Innovation Grants**
  - **Career and Technology Education Innovation Grants:** \$15 million to support the establishment and enhancement of career and technology education programs that prepare students for success in today's high-skill economy, align with workforce needs, and link students to employment in high-wage/high-demand fields.
  - **Career and Technical Education Equipment Grants:** \$5 million in new funding for CTE Equipment Grants, with priority for applicants that show an in-kind or monetary contribution from employers or other partners. Career and Technology Innovation Grant applicants will also receive priority in the awarding of Career and Technical Education Equipment Grants.
  - **Career Counseling Grants:** \$8 million to school districts to offer college and career exploration and counseling in middle and high schools in order to help students learn about and prepare for career and occupational choices. Career and Technology Innovation Grant applicants will receive priority in the awarding of Career Counselor Grants.
  - Read more about the new grants created through the Governor's 2015-2016 budget [here](#)

## Rhode Island

- **[Skill Up RI](#):** provides funding to school districts that commit to develop innovative programs that will provide career and technical programming aligned to high-growth, high-wage areas identified as key to Rhode Island's economic development and foster partnerships between K-12, postsecondary institutions and private industry partners.

## South Carolina

- No new initiatives other than the federal Perkins grant.

## South Dakota

- No new initiatives other than the federal Perkins grant.

## Tennessee

- **New Skills for Youth Grant (2016):** Secured \$100,000 grant to evaluate CTE in the state and develop new, robust career pathways for Tennessee students.
- **IES-SLDS College and Careers Grant (2015):** Secured \$3.5 million over 4 years to assist students, parents, and educators in making informed choices about postsecondary and career opportunities.
- **LEAP Grant (2016):** \$10 million for regional grants to eliminate skills gaps
- **Public Chapter 351 (2013):** provides funding to eliminate the cost of student exam fees for industry certification and advanced placement exams. This has been operating in pilot form since 2013-14.
- **TN Promise:** Last dollar scholarship for students who enroll into a TN College of Applied Tech or community college.

## Texas

- No new initiatives other than the federal Perkins grant.

## Utah

- No new initiatives other than the federal Perkins grant.

## Vermont

- No new initiatives other than the federal Perkins grant.

## Virginia

- **Governor's Health Sciences Academies:** designed to expand options for students' health science literacy and other critical knowledge, skills, and credentials that will prepare them for high-demand, high-wage, and high-skills careers in Virginia. Each academy is a partnership among school divisions, postsecondary institutions and business and industry.
- **Governor's STEM Academies:** designed to expand options for the general student population to acquire STEM (Science, Technology, Engineering and Mathematics) literacy and other critical skills, knowledge and credentials that will prepare them for high-demand, high-wage, and high-skill careers in Virginia. Each academy is a partnership among school divisions, postsecondary institutions and business and industry.

## Washington

- **Statewide [Course Equivalencies](#) (2014):** course equivalencies between math, science, and CTE courses.

## West Virginia

- **West Virginia [EDGE Initiative](#):** provides multiple opportunities for students entering the workforce in the 21st century. The initiative requires a collaborative partnership between business/labor, postsecondary, and secondary educational levels. Its main purpose is to provide viable career options for individuals through a rigorous, seamless curriculum, work-based learning experiences, and career development. EDGE also allows students to graduate early.

## Wisconsin

- **Financial Literacy Innovation Grants (\$150,000 in 2016-17):** promoting innovation in the teaching of personal financial literacy (PFL) in the classroom. Funds are being awarded through a competitive grant program to schools, partnering with communities, to support the implementation of the Model Academic Standards in order to improve financial literacy among youth.
- **New Skills for Youth Grant (2016):** Secured \$100,000 grant to evaluate CTE in the state and develop new, robust career pathways for Wisconsin students

## Wyoming

- **Distance Education Grant (\$200,000 in 2016-17):** to develop and maintain distance education programs in Wyoming.
- **Dual Language Immersion Grant (\$450,000 in 2014-15 and 2015-16):** to initiate a Dual Language Immersion Program within schools during school years 2014-15 and 2015-16" (2014 Wyoming Sessions Laws 113). The purposes of this grant is to distribute financial assistance to school districts for the provision of Dual Language Immersion Programs and to require the use of a target foreign language during not less than 50% of student-teacher contact time during each school day.

- **Wyoming Trust Fund for Innovative Education (\$250,000 in 2016-17):** to provide innovation in or improvement of public education through the creation of new, different and improved educational opportunities in elementary and secondary schools inclusive of several areas including technical education.