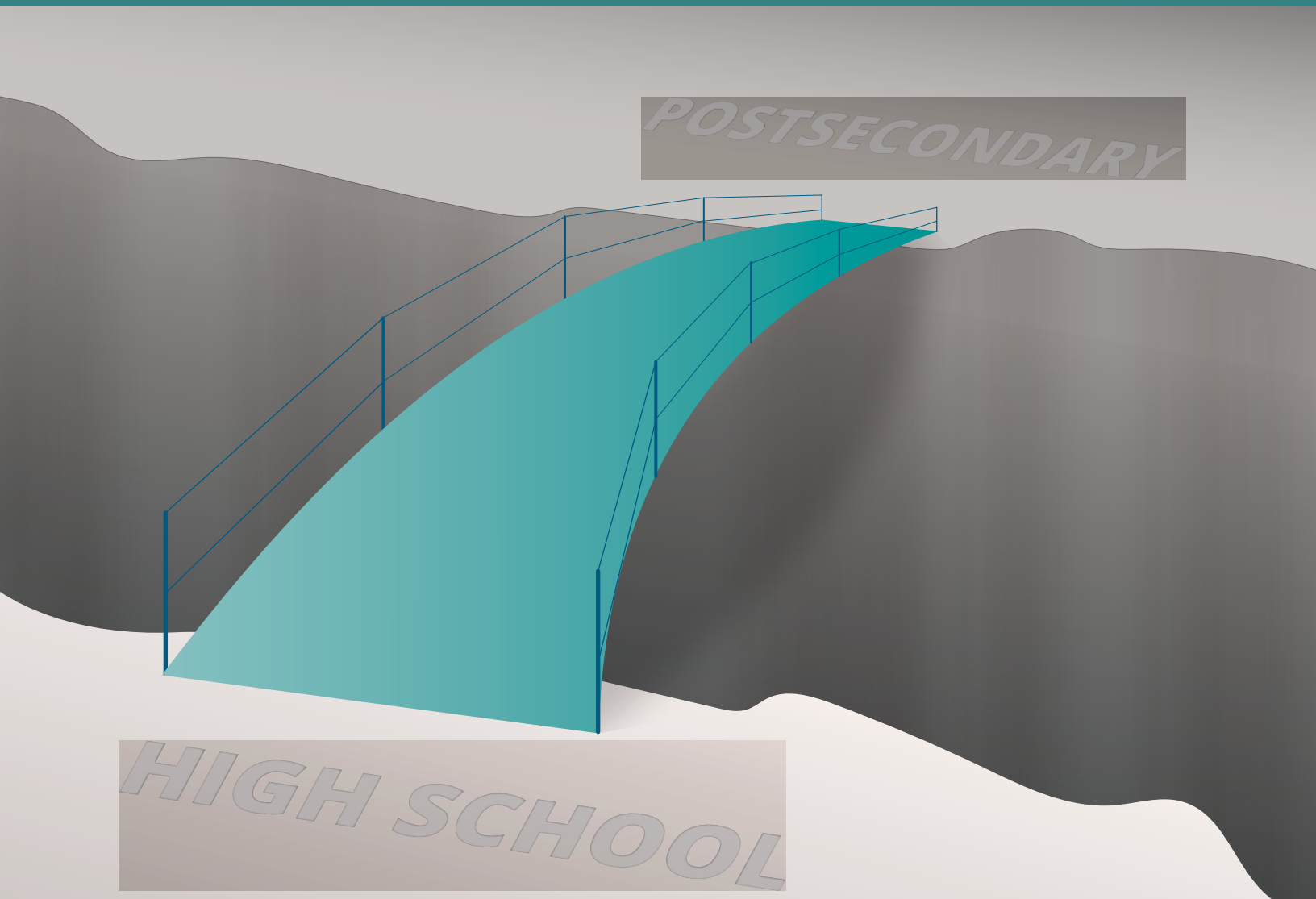
TN Department of Education

SEAMLESS PATHWAYS

Bridging Tennessee's Gap Between High School and Postsecondary



January 2017

EXECUTIVE SUMMARY

The majority of Tennessee ninth graders graduate from high school, but far fewer make the leap to postsecondary education. Recently launched statewide initiatives have fundamentally shifted the educational landscape, substantially reducing barriers to postsecondary access. Our state now stands at the cusp of a historical transformation where we can make postsecondary success the norm rather than the exception.

What will it take to get there?

In focus groups with 170 high school students from 33 schools, we listened to our students describe the challenges they face in identifying pathways to take them from high school to postsecondary and careers. Additional analyses using Tennessee data confirm the stories told by our students.

- Tennessee counselors face an impossible dilemma, supporting college and career pathways for hundreds of students on average while managing a host of non-counseling duties.
- One-third of Tennessee high school graduates receive a diploma without ever completing the state's minimum course requirements.
- Less than one-quarter of high school graduates earn early postsecondary credit.
- High school teachers appear unaware of the extent of the problem, with most teachers even in our most challenged schools saying that students are well informed and plan to attend postsecondary.

Drawing on data from these analyses, as well as case studies of two Tennessee high schools that have seen large gains in postsecondary enrollment, we offer four recommendations for school and district leaders to consider in order to ensure that we move rapidly forward toward attaining our statewide goals for postsecondary completion.

1. Foster collective responsibility among middle and high school faculty and staff for the postsecondary preparedness of their students.
2. Communicate with students about their postsecondary and career options early and often.
3. Ensure all students have equitable access to course opportunities to increase postsecondary readiness and success.
4. Leverage external partnerships and resources for added capacity, expertise, and influence.

This report was written by the Tennessee Department of Education's Office of Research and Strategy and designed by Brad Walker.

Contents

Executive Summary 1
Introduction 2
A Statewide System of Support.....5
The Challenge.....6
Recommendations 21
Conclusion 26

INTRODUCTION

Tennessee is poised to become a national leader in preparing students for the changing demands of our workforce. Nearly 90 percent of ninth graders receive a high school diploma within four years and groundbreaking state initiatives such as Tennessee Promise now make it possible for all students to attend a two-year community or technical college tuition-free. We have also seen historic shifts in student trajectories when they attend postsecondary. Over the past five years, the need for remedial coursework among entering community college freshmen has decreased from 67 to 52 percent, in part because of innovative approaches that offer remedial coursework in high school. **We now have the opportunity to radically change the system so that most Tennessee students enter and complete postsecondary education.**

Yet the state is not realizing this potential. Even with recent increases in postsecondary matriculation, the percentage of Tennessee students participating in postsecondary education is low compared with the rest of the country. Nearly 35 percent of high school graduates do not enroll in postsecondary within two years of graduation. Others quickly drop out after enrolling. **Less than one-quarter of high school seniors from the graduating class of 2008 received a postsecondary credential from a technical college, community college or four-year institution within six years of high school graduation.**

This report focuses on the systemic barriers that students face during high school, detailing a set of related issues that keep postsecondary enrollment and completion rates in Tennessee lower than the national average.[1] We find strong evidence that too few students receive sufficient guidance from counselors, teachers, and staff in their schools to ensure that they are on pathways leading to postsecondary completion and successful careers. **We propose that, alongside instructional improvements which must always remain at the forefront, the greatest current need is to align and strengthen the support systems that help students navigate high school toward postsecondary success.**

Over the past year, Tennessee, led by Governor Bill Haslam through his Drive to 55 initiative, has launched a series of programs aimed at supporting high schools in bridging the chasm between graduation and postsecondary. These efforts include financial support through Tennessee Promise; college guidance through AdviseTN, a new college advising and capacity-building program; a statewide framework for counselor action; increased access to early postsecondary opportunities (EPSOs); opportunity for all students to retake the ACT; and an award of a federal Institute for Education Sciences grant to increase access to a statewide longitudinal data system for students and school counselors to allow students to make more informed decisions about their postsecondary and career plans.[2]

But changing the postsecondary-going landscape will require more than just state-level action. Based on evidence presented in this report, we offer four recommendations that districts and schools can employ to help students take advantage of postsecondary opportunities in our state.

What can districts and schools do to help students take advantage of postsecondary opportunities?

Foster collective responsibility among middle and high school faculty and staff for the postsecondary preparedness of their students

School counselors cannot be the sole source of information on course planning and postsecondary pathways. Our most successful districts spread the knowledge and the accountability for helping prepare students for postsecondary across all schools and the entire staff.

Communicate with students about their postsecondary and career options early and often

Many students say they are not receiving concrete information about postsecondary possibilities or given opportunities to explore career options until their junior or senior year, by which point they might have missed valuable learning opportunities to turn the possibilities into realities. Planning can and should begin in the middle school years.

Ensure all students have equitable access to course opportunities to increase postsecondary readiness and success

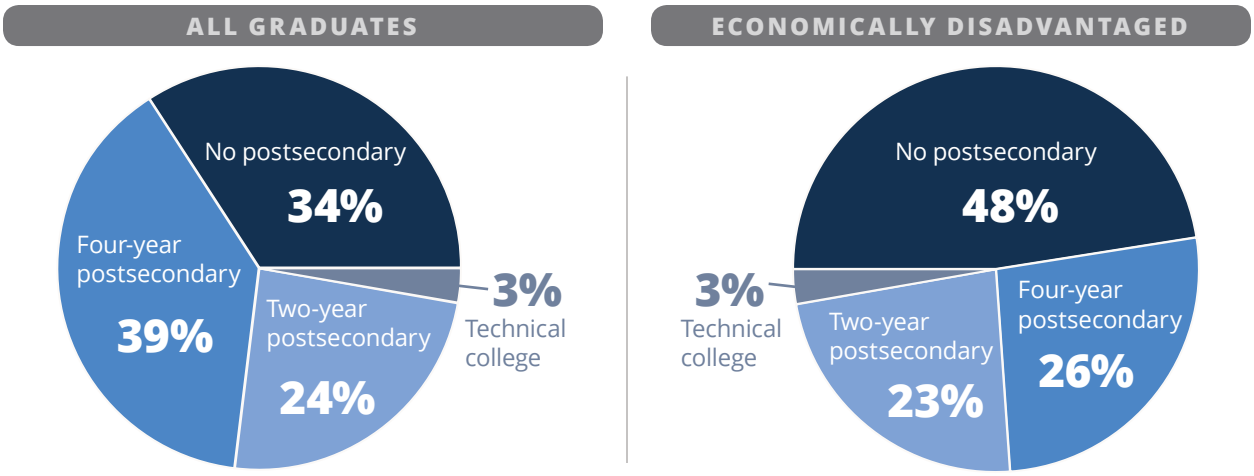
Depending on the school they attend and the guidance they receive, students face a very different landscape of course options, both within and across schools, especially when it comes to early postsecondary coursework. Greater access to rigorous early postsecondary opportunities is likely to result in meaningful gains in postsecondary attendance.

Leverage external partnerships and resources for added capacity, expertise, and influence

High schools already do a lot. Building a strong postsecondary pipeline places a series of new demands on our schools, so strong partnerships make our schools far more likely to succeed.

2013–14 Tennessee High School Graduates

This figure focuses on the 87 percent of students who graduated high school. We used 2013-14 graduates for this figure in order to draw on the most recent salary and postsecondary information available.



Students who graduated from high school and entered the workforce earned an **average salary of $10,880 annually**, far below the poverty line.

Tennessee's ambitious postsecondary goal

In 2015, the department launched *Tennessee Succeeds*, a five-year strategic plan. In alignment with the state's Drive to 55 initiative, the plan set the goal that the majority of high school graduates from the class of 2020 earn a postsecondary certificate, diploma, or degree. This is a lofty goal, given that just 23 percent of high school seniors from the graduating class of 2008 received a postsecondary credential. To meet our goals, we will need to accelerate the rate of improvement by continuing to increase both postsecondary enrollment and completion rates.

The current job market increasingly demands postsecondary credentials. The Tennessee Department of Labor and Workforce Development has reported that employer demand is highest in fields such as technology, healthcare, engineering, and accounting—all of which require postsecondary credentials. Furthermore, postsecondary credentials open doors to higher paying positions. Students who graduated high school in 2014 but did not enroll in postsecondary earned an average of $10,880 a year in their first year out of school. Over the course of their careers, those with bachelor's degrees will earn over $800,000 more in income, compared to those with only high school diplomas.[3]

To ensure that the students graduating from Tennessee public schools are set up for success, we must get more of our high school graduates to and through postsecondary.

A key component of increasing postsecondary enrollment and completion rates is raising student performance on the ACT. High school graduates of the class of 2015 scored an average composite ACT score of 19.4, and the 2016 graduates maintained this average despite a higher percentage of students taking the ACT than previous years. Relative to the 18 other states that test all of their students on the ACT, Tennessee ranked seventh. Still, just 17 percent of students met the four college ready benchmarks on math, English, reading, and science tests, and only 38 percent scored above a 21. The department has set a goal of reaching an average composite ACT score of 21 by 2020.

To ensure that the students graduating from Tennessee public schools are set up for success, we must get more of our high school graduates to and through postsecondary. We know growth is possible because several of our high schools are already demonstrating success in sending large numbers of their students to postsecondary. Sixty-two Tennessee high schools sent 75 percent or more of their 2015 graduates on to postsecondary degree programs. Taking this kind of success to scale will require thoughtful action steps targeted to address key challenges.

A Statewide System of Support

This report focuses on district- and school-level actions to place students on the path to a postsecondary degree and career attainment, but the success of these more local strategies depends on a strong statewide system of support. Here is a description of Tennessee policies and programs aimed at getting more high schoolers to earn a postsecondary credential.

Governor Bill Haslam launched the Drive to 55 in fall of 2013 to highlight the needs of a changing Tennessee workforce, which is demanding more Tennesseans hold a postsecondary certificate or degree. Along with programs aimed at helping adults complete degree programs and expanding the available number of postsecondary seats, several Drive to 55 programs, run out of the Tennessee Higher Education Commission, are aimed specifically at high schoolers.

The *Tennessee Promise* provides all Tennessee high school graduates with a **guarantee of free tuition** at any Tennessee community college or technical college, provided that the students hit a series of milestones their senior year including completing the FAFSA (Free Application for Federal Student Aid), attending several mentoring meetings, and performing at least eight hours of community service per term enrolled.

AdviseTN, which just started this year on a pilot basis, is providing 30 high schools with **additional counseling services** for students during their junior and senior years, with plans to expand these partnerships to include more schools in subsequent years.

These multi-agency programs support a collection of school- and district-focused work driven by the Tennessee Department of Education. The department's contribution includes a new set of *goals* for student success; aligned *standards*, *assessments*, and *accountability*; and several *programs* that allow greater district empowerment and experimentation in these areas.

Tennessee Succeeds, the department's strategic plan, lays out two goals aimed at bridging high school and postsecondary. We want to **raise the state's average ACT composite score** to a 21 by 2020, giving more students access to scholarship opportunities and signaling that the average student in Tennessee is prepared for postsecondary coursework. We also expect the majority of students from the high school class of 2020 to **earn a postsecondary certificate, diploma, or degree**. We are tracking progress using a series of intermediate data points including early postsecondary course completion, CTE participation, end of course exam proficiency, and postsecondary matriculation rates.

These goals are supported by several major changes to standards, assessments, and accountability. The Tennessee Academic Standards, which will be rolled out in the 2017–18 school year, represent high expectations for students aligned across grade levels. TNReady assessments are designed to measure crucial indicators of students' critical thinking abilities and support the transition to these standards. District and school efforts to ensure that students are earning ACT composite and benchmark scores that keep them out of postsecondary remediation and earn them scholarship opportunities are now recognized through a revamped **accountability system that includes student ACT composite scores**.

Finally, we have launched a series of programs and pilots designed to support and empower districts. Districts can now take advantage of free **ACT retake opportunities** and a state board approved **ACT preparation course**. The department is also facilitating **collaborative groups** to ensure CTE programs of study are aligned to local postsecondary offerings and workforce needs, counselors are supported through increased peer interaction, and that appropriate capstone learning opportunities are available for students. We are also expanding our **postsecondary data-sharing capabilities** to make it possible for schools and districts to know more about their students' successs after they leave high school.

THE CHALLENGE

Too many students say they are not receiving the resources or guidance to set them on a pathway toward postsecondary.

To better understand the challenges we face in sending more students on to postsecondary and into productive careers, we began by talking to our state's high school students. In April and May 2016, the department conducted focus groups with students across the state to better understand their high school experiences. Over 170 students from 33 schools in 25 districts participated in 26 focus groups.[4] Students answered questions in multiple areas, including how their schools help them think about postsecondary and choosing a career path.

Roughly half of the students said they felt positively about their schools' efforts to prepare them for postsecondary. These students described how their schools were offering classes that encouraged and facilitated the move to higher education. One student remarked, "With the dual classes at our school, I think that that's something that really helps us for college, because we're getting the college credit. We're already getting those classes out of the way, but we're still in the comfort of our own high school. We don't just feel thrown out into the college world." Another student echoed this sentiment, "I feel like the overall goal in my school is to transition you to college. With all the dual enrollment and Advanced Placement [AP] classes that we offer, I feel that's a good transition into college." Other students honed in on their schools' efforts to provide postsecondary information, saying that the school staff met with students to make them aware of scholarship opportunities and help them plan for life after high school.

STUDENT VOICE

> "This past year in my Spanish class, we had to do a project on which college I'm thinking about going to. We had to do research on it, and that's probably the farthest I've ever gone into thinking about college, just because we don't really talk about it at school."

The other half of students reported feeling left in the dark when it came to information about college. As one student said, "I can genuinely say that we never talk about after-college plans, much less college plans. I have no idea how to apply for college or scholarships and I'm not prepared. I really am not." Many students reported feeling like they weren't receiving enough postsecondary support, and when they did, it was too late to be helpful. One student told us: "You don't really learn anything about it until you're a senior. And I wish that we did, 'cause that's kind of scary—like, you just get into it when you're a senior. I wish that we would learn about it when we were

> I don't believe we're taught enough about how to apply to colleges...And I haven't learned enough as a junior or sophomore to even consider it...We don't know enough.

STUDENT VOICE

younger, like freshmen." Students reported that waiting until senior year to discuss postsecondary options felt too late because financial aid and scholarship opportunities were often no longer available.

In addition, students reported that their school counselors were largely supportive, but that accessing them to get postsecondary and career guidance was often a struggle. In particular, students identified high student-to-counselor ratios as problematic. As one student reported, "It's hard for two people to meet the needs of 750." Other students noted that counselor support was focused mostly on seniors, echoing the sentiments above regarding a desire for earlier information. Several students also noted that counselors were saddled with many other responsibilities in addition to preparing students for post-graduation life. One student said, "I have to wait in line on this long list [to be seen], and it's like [the counselors] have so much other stuff that they have to do that they don't have time to do their job, which is to guide us."

In contrast, the students who said that their schools were preparing them for postsecondary reported that they relied on both their counselors and teachers for postsecondary support. One student talked about how many of his teachers and the counselor would meet with them to talk about Tennessee Promise and what college they wanted to attend. Another student stated that most of the postsecondary push actually came from teachers: "It's more of our teachers [rather than counselors] that are like, 'Hey, these are really good opportunities for you.'"

Students who reported feeling underprepared for postsecondary also discussed how their course content and offerings contributed to their lack of preparation for both college-level academics and for performing well on the ACT. Many of these students said they wished they had access to the more advanced course offerings and more rigorous coursework that they heard about from students in other schools. For example, one student said that she had to choose between taking pre-calculus and AP History because both courses were only offered once per day at the same time. Another explained: "I feel like a lot of times teachers try to get all the standards in . . . it's hard

> I feel like we had more exposure to postsecondary in middle school, because I know in middle school they met with us a lot talking about college. That was fifth through eighth grade...And then you start freshman year and you don't get anything. The closest thing to talking about college is the college field trip we have every year, and that's it. We don't have any other exposure to colleges.

STUDENT VOICE

to get in everything they need just for the test instead of teaching [students] what they actually need to know for later on in your high school and college and even career." A third said, "I think some of the assignments are kind of weak. I think as we go into college we're going to be writing more papers than we are here. I hardly write any."

These concerns combined to leave students feeling like the path they were taking through high school ended at high school graduation. The prevailing sentiment among a substantial group of students we spoke with was that they knew they were supposed to be making a transition toward postsecondary at the end of their senior year, but they were approaching the end of high school without a clear sense for either what this actually meant or whether they were ready for the next step. In the next sections, we explore more about why this might be the case.

Given their heavy caseloads and numerous responsibilities, school counselors cannot be the sole source of postsecondary and career information.

The responsibilities of providing course and postsecondary and career guidance are typically placed on the shoulders of Tennessee's high school counselors. However, while school counselors are a major source of information for guiding and supporting students through high school and into postsecondary and careers, they cannot be the sole solution for addressing these challenges.

Under the nationally recommended comprehensive model of school counseling,[5] school counselors have many responsibilities, including (but not limited to) helping students with academic and career planning for high school and beyond; supporting students who are dealing with traumatic life/social/academic events; advocating for students; and liaising between administrators, teachers, parents, and students. When used properly, school counselors provide a vital layer of academic and socio-emotional support for students.

STUDENT VOICE

> "Our counselors are kind of all-consumed with their seniors. It's a good thing, but if you wouldn't wait until they got to that point, then it would be so much easier. Because it's like, 'Hey you're a senior. You should do this, this and this.' All in this short amount of time. But if they had started that sophomore year or so it would be so much smoother. They wouldn't be so frantic about it."

The landscape of school counseling in Tennessee, examined from a variety of data sources, demonstrates that many school counselors are not able to devote their full attention to the suggested duties described above. There are three interconnected reasons for this: 1) school counselors' student caseloads are typically much larger than recommended, 2) school counselors are tasked often with incredibly time-consuming non-counseling duties, and 3) administrators, preparation programs, and practicing school counselors in Tennessee lack a clear, cohesive vision for school counseling. See the vignette below entitled "A Day in the Life of a Tennessee School Counselor" for an example of what these challenges look like in practice.

Too many kids, too few counselors

Several high school students said they often feel short changed in their engagement with their school counselor(s) due to high student-to-counselor ratios in their schools. Tennessee's Basic Education Program (BEP)—the funding formula through which state education dollars are generated and distributed to schools[6]—funds a maximum student-to-counselor ratio of 350:1 for grades 7–12. According to 2015 staffing data, there are approximately 1,170 school counselors working with students in grades 7–12 in the state, with a mean student-to-school counselor ratio of 439:1. In three-fourths of the school districts in Tennessee, school counselors are assigned more students than recommended by BEP, with some counselors serving more than twice the recommended student caseload. Interestingly, the national recommendation for the student-to-school counselor ratio is 250:1. If we evaluated Tennessee data against this recommendation, over 90 percent of districts would be designated as having a counselor shortage.

Too many tasks, too little time

In addition to managing larger-than-recommended caseloads, school counselors are often tasked with many non-counseling duties that take time away from providing services to students. For example, results from the 2015 and 2016 Tennessee Educator Surveys (TES)[7] revealed that school counselors are pulled in a multitude of directions—with testing coordination proving to be one of the biggest draws on counselors' time.

To better understand Tennessee school counselors' day-to-day work, researchers from the department shadowed a sample of counselors for an entire day and conducted interviews with administrators and counselors. As one assistant principal expressed, "It's almost become a job in and of itself just to coordinate testing." He was not alone in this view, as another principal declared that, for his school counselor, "A big, huge, very time-consuming piece [of work] is the testing coordination." Although this principal also described his efforts to secure funds to hire a testing coordinator in order to protect his school counselor's time, the testing burden ultimately fell solely on the school counselor.

A Day in the Life of a Tennessee High School Counselor

Ms. Jones arrives at school around 7 a.m., before the students start filing in. Along with the principal, she stands in the front lobby welcoming a wave of teenagers into the building, greeting many of them by name. As the opening bell rings, students scatter to their first class, and Ms. Jones begins what will be another whirlwind day. It's May, graduation is approaching, and she is in charge of making sure everything is in place for the end-of-year academic banquet that evening. She is also responsible for registering approximately 350 underclassmen for their courses for the next school year and processing transcript requests for the 75 seniors in the graduating class who are going on to a postsecondary institution.

She settles into her desk and begins to finalize the academic banquet's program when a student—the first of many that day—enters her office. The student has questions about a dual enrollment biology course she's thinking about taking over the summer. After listening to the students' concerns, Ms. Jones explains that, while the course will be challenging, she feels this student has the aptitude and ability to do well in it. She asks the student about her summer work schedule and whether she'll be able to balance work, school, and summertime distractions. At the end of the 15-minute conversation they collectively decide that the student, with her parents' sign-off, will enroll in the summer course. Ms. Jones has at least six more of these conversations over the course of the day. In some cases, she counsels the students out of the summer course, encouraging them to take it during the school year when the course moves at a more moderate pace and includes greater supports. She encourages—and in some cases, pushes—others to challenge themselves and take the course.

Ms. Jones is also visited by a number of teachers. A science teacher checks in about two students he and Ms. Jones have been collectively supporting through their academic difficulties in the teacher's course. They discuss the students' outlooks for the final exam and what courses to recommend for the following school year. Throughout the day, she interacts with Principal Johnson, filling him in on students and situations as needed, and giving updates on the academic banquet. It is clear that they have a very positive relationship. He is eager to tell anyone who will listen about the great work his counselor does and the trust he has in her abilities. He'll also be the first to say that he leaves the counseling work entirely up to her, unless a matter needs escalating.

STUDENT VOICES

> "Our counselors, I feel like I couldn't go to them and ask them many questions, because I feel like they don't give us a lot of time...And I'd love to be welcomed to the guidance office. Especially going into senior year. I don't even know really where to begin."

While this energetic school counselor managed to see almost 20 students in a single day, there are about 400 she is responsible for guiding and supporting.

In addition to the many academically-focused conversations Ms. Jones has with teachers and students throughout the day, she also supports students dealing with non-academic matters. One of the students at the high school has been struggling through a recent breakup and, rumor has it, has turned to substances to cope. This student spends a significant portion of the morning in and out of Ms. Jones' office. Ms. Jones asks him probing questions to determine whether or not additional outside agencies should be involved and phones his mother to make sure she's aware of the problem. In the midst of all these conversations, Ms. Jones fills transcript requests and files students' upcoming course schedules, working on them here and there, whenever she has a spare minute. She will have to do the bulk of this paperwork outside of school hours in order to meet transcript and registration deadlines.

Ms. Jones eats in the cafeteria during one of the lunch periods. While she sits at a table with other teachers, she constantly interacts with students. She calls out to students as they walk by, "Darian, don't forget to check in with Mrs. Sims about making up that economics assignment," "Jessie, you need to stop by my office to talk about the upcoming field trip to UT." After lunch, before heading back to her office, Ms. Jones checks in with a group of student council members selling school T-shirts as part of a fundraiser because she is their faculty advisor.

Ms. Jones' afternoon looks very similar to her morning. She checks in with students and teachers and completes paperwork when time allows. However, the nature of her work—the one-on-one interactions with students and teachers—means that the actual details of her afternoon (and the day in general) are anything but routine. Each student has a distinct situation and needs, and Ms. Jones has to understand and factor in each of these into her guidance. While this energetic school counselor managed to see almost 20 students in a single day, there are about 400 she is responsible for guiding and supporting. She spends the majority of her time managing paperwork and meeting with students individually, which leaves little time for developing and training the rest of the school's staff on a comprehensive model of school counseling. With a comprehensive model, school administrators and staff would have a shared understanding and a shared responsibility for collectively guiding the schools' 400 students, protecting Ms. Jones' one-on-one time to be used for students with the greatest immediate need.

"We have a college counselor, but she only is focused on the seniors. And like I'd like to know what to do before senior year because that's when I have to start making decisions. I'd like to be prepared before senior year."

"I think we have a good counselor but with registration and the seniors having to turn in scholarships and stuff...she's only one person. I don't really think it's her fault. It's just that we don't really have anything else."

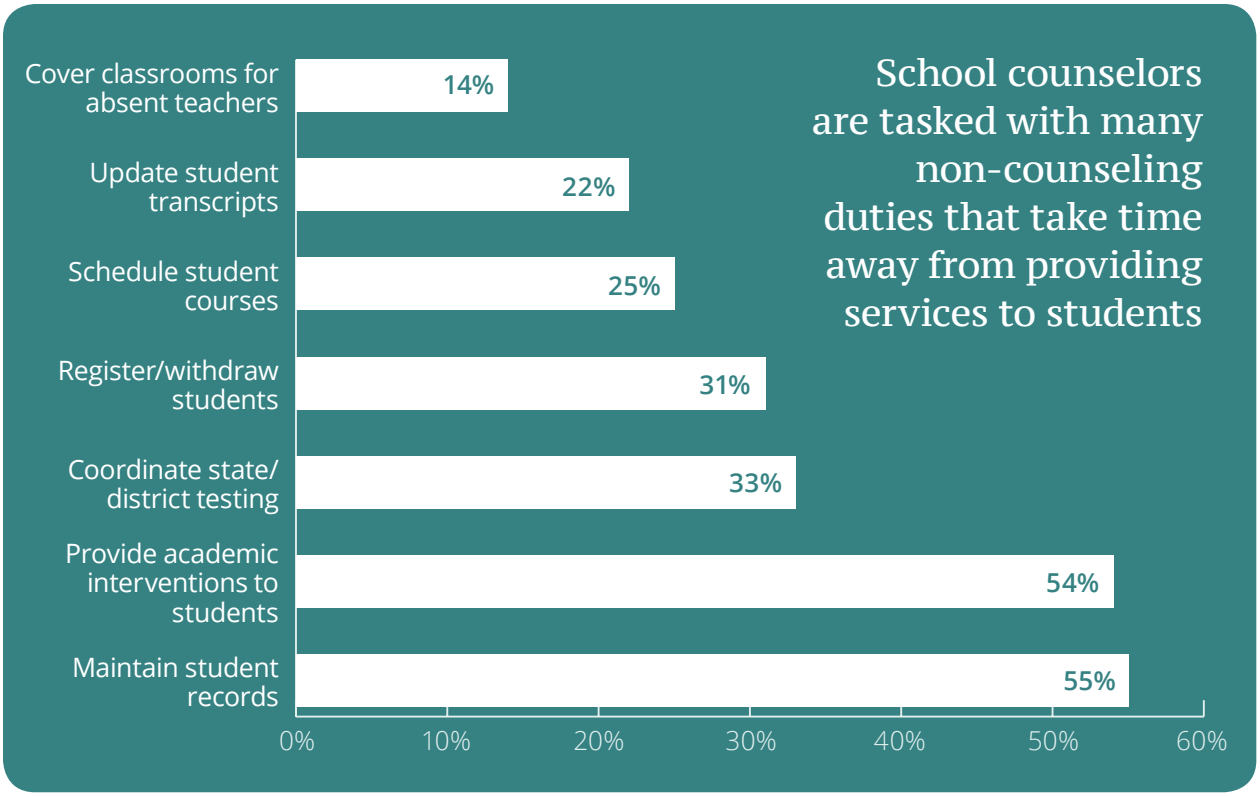


Figure 1. Percent of TN counselors who report engaging in the following activity at least monthly

Other non-counseling activities consuming large amounts of school counselors' time include master scheduling and Response to Intervention and Instruction (RTI[2]) coordination. As one principal described, "[The school counselor] has a tremendous workload with all of the different hats that she has to wear, from providing academic support, scheduling, to social and emotional guidance, testing coordinator, [and she's] involved in school improvement planning and RTI planning."

Schools lack clarity about what school counseling should look like in Tennessee

There is very little consensus among counselors and principals about what a comprehensive school counseling program should include. On the surveys, they frequently included duties that are outside the scope of the school counselor's role according to recommended best practice. While certain attributes were consistently cited, like academic advising geared at helping students graduate from high school, a clear vision connected to recommended best practices was rarely articulated by administrators and/or counselors. As one principal stated, "I would say [the counselor does] the data entry-type stuff, student schedules, student reports, grades, anything like that that involves a student record. And then after that it would just be counseling students on a variety of issues. Some of the counselors step forward and do a little more than that, some try to help out with discipline, for example, or work with kids in small groups based on their needs."

Administrators acknowledged that they learned little to nothing in their preparation programs about the role of the school counselor and that, instead, day-to-day experiences guide their view of what school counselors should be doing. A disconnect also

exists between the roles and responsibilities high school counselors are expected to fulfill and their preparation. In Tennessee and across the nation, the majority of school counselor preparation programs currently include very little—if any—explicit training on college and career advising, one of the most important jobs of a high school counselor. The department is actively working to clarify the role of the school counselor through a variety of guidance documents and direct support to districts schools led by a newly hired Coordinator of School Counseling. Additionally, the State Board of Education recently approved a revised comprehensive school counseling model and standards, which will go into effect during the 2017–18 school year.

The challenges on the counseling front are most obvious when you review the guidance students receive or do not receive about how to chart a pathway through high school that leads to and aligns with postsecondary and career success. A key piece of these desired pathways are the courses students take and are made available to them. We find substantial evidence in our analyses of student course enrollment records that many of our students are being overlooked.

One-third of high school graduates are not completing all course requirements.

Tennessee has some of the most stringent graduation requirements in the nation. Under the Tennessee Diploma Project, implemented in the 2009–10 school year, students are required to earn at least 22 credits in high school. In theory, students must take a full slate of college-preparatory courses, including four English and math courses, three science courses, four social studies courses, and two foreign language courses.

Yet when we actually examined the course enrollment data of 2015 Tennessee graduates, we found that one-third of students passed through the system and graduated without actually completing the set of required courses.[8] Most commonly, students were missing either the two foreign language credits or the specific required social studies courses.[9] For social studies, some students had taken a sufficient number of classes but failed to complete the exact courses specified by state policy.

Tennessee Graduation Requirements

Math 4 credits
including Algebra I, Geometry, Algebra II, (or integrated Math I, II, and III) and a fourth higher-level course

Science 3 credits
including Biology, Chemistry or Physics, and a third lab science

Social Studies 3 credits
including US History & Geography, World History & Geography, US Government & Civics, and Economics

English 4 credits

Fine Arts 1 credit

Foreign Language 2 credits
In the same language

Physical Education and Wellness 1.5 credits

Personal Finance 0.5 credits

Elective Focus 3 credits
Should be a related group of courses

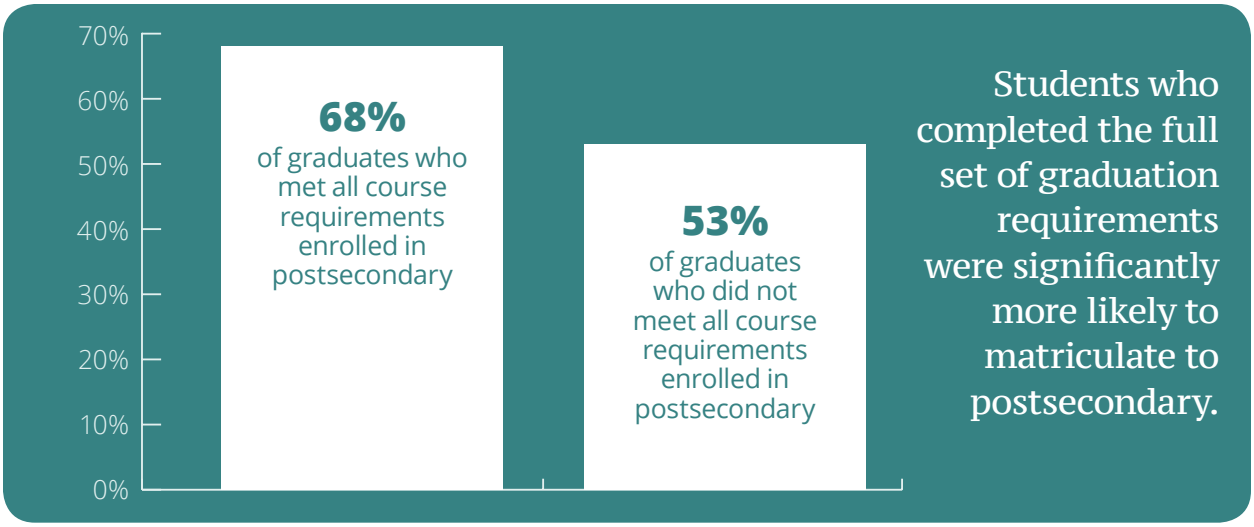


Figure 2. Percent of students who enrolled in postsecondary

The missed courses have important consequences for students. Of the students in the 2015 graduating class who completed all of their high school course requirements, 68 percent enrolled in a postsecondary institution in the fall, compared to 53 percent of those who did not complete all of their high school requirements. Furthermore, among groups of high school graduates whose academic performance on the ACT looked identical, those that left Tennessee public schools having completed the full set of graduation requirements were significantly more likely to matriculate directly to postsecondary and were also more likely to attend four-year versus two-year institutions.[10]

In most of our schools, the majority of students met all course requirements. But in 28 percent of high schools, less than half of graduates met all course requirements, even though the necessary courses were offered within the school.[11] Larger schools with more counselors were more likely to have students meeting all course requirements. This may be due to increased structures and oversight.

The finding that one-third of students are not taking the required core courses indicates a bigger issue—that students are not receiving sufficient guidance and attention when selecting their courses. This leads us to ask: if one-third of graduates are not taking the required courses, what other opportunities are being overlooked?

STUDENT VOICES

"One thing I'd like to say about our core classes is...if you're really smart [and]...you're taking a lot of AP classes, we're required to take four core classes every year. And no matter how smart you could be, and if you're taking a bunch of AP classes, it seems as if it's almost impossible to take a whole bunch of electives that would focus on where you want to be when you go off to college, and what you want to do."

"If you say that you have a math or science focus, I want to take mostly those classes. But, there's not enough to get you through. You're going to have to end up taking automotive or construction to ensure that you graduate."

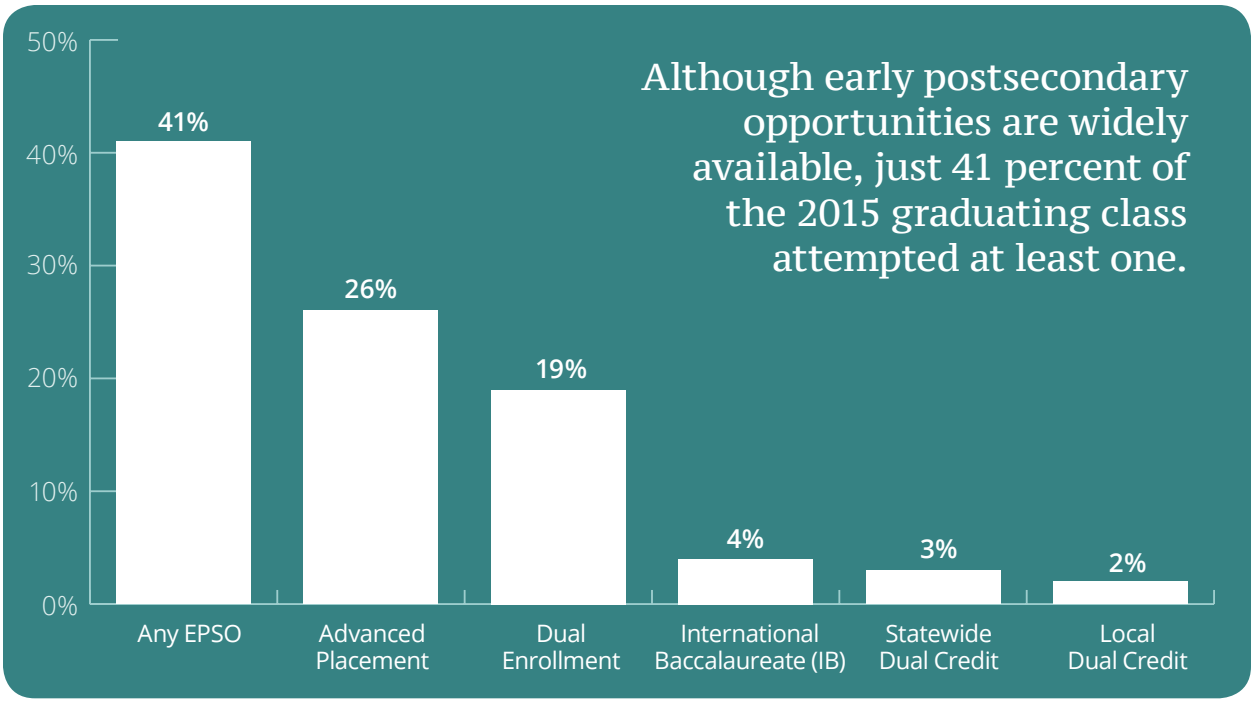
Less than one-quarter of high school graduates earn early postsecondary credit.

We see a similar pattern of students missing potential opportunities to solidify a postsecondary and career pathway when it comes to early postsecondary opportunities (EPSOs). Research has shown that students who participate in early postsecondary courses are more likely to enroll and persist in postsecondary education.[12] Three primary benefits of EPSOs for students are: 1) earning credits/hours toward a postsecondary credential, giving them a head start and potentially reducing the cost of postsecondary degree attainment, 2) better preparing them for the rigor of postsecondary coursework, and 3) gaining experience and confidence in navigating postsecondary expectations and culture.

Tennessee data from the graduating class of 2015 support the importance of early postsecondary course taking during high school. Most students who earned postsecondary credit in high school entered their postsecondary institution having earned as much as a full semester's worth of courses (6–12 credit hours). Furthermore, almost 50 percent of 2015 graduates who enrolled in a Tennessee public four-year university had accumulated credits toward their degree while in high school.

Districts and schools across the state recognize these benefits. Nearly every high school in Tennessee offers some type of EPSO. However, too few schools offer multiple courses in different types of early postsecondary courses that would allow for all students to take courses aligned with their pathways and interests. Just one quarter of high schools offer three or more types of early postsecondary opportunities. Only 41 percent of the 2015 graduating class attempted at least one EPSO, and just one-quarter performed well enough in the course and/or the culminating final exam to earn a postsecondary credit.

Figure 3. Percent of 2015 high school graduates enrolling in EPSOs



We see missed opportunities across all parts of the academic spectrum. Through new policies and agreements, high school students who concentrate in career and technical education (CTE) and who sit for and pass capstone industry certifications can receive postsecondary hours for their certifications when they matriculate to the Tennessee College of Advanced Technology (TCATs) system. However, although 70 percent of the students enrolling in TCATs upon graduation in 2015 were students who concentrated in CTE, just 10 percent of those TCAT enrollees took a dual enrollment course in high school.

Even those students who are most likely to attend postsecondary demonstrate relatively low rates of early postsecondary enrollment. Just over half of 2015 graduates who had "college ready" scores on the ACT PLAN English Language Arts exam attempted EPSOs. Furthermore, economically disadvantaged students were half as likely to have enrolled in EPSOs compared to their non-economically disadvantaged peers.

STUDENT VOICES

"We have very limited classes, maybe enough to get by with the number of credits you need. For the first three years, you kind of get to choose the course on where you want to go, but I'm about to go into my senior year and there aren't a lot of choices. Like you'll have your math, science, but other than that you basically get stuck in pointless classes. Classes you can breeze by that you really won't get any accomplishment out of."

"I first pick what I need to take to graduate and then do classes that I'm interested in. But I feel like with being accepted into classes, sometimes you have to apply for it, there's definitely an unfair kind of...there was a big problem here a couple months ago when we were picking our AP courses. And a huge population of students didn't get into the AP courses."

"A big issue at our school is scheduling. I tried to sign up for two or three classes this year that I was not able to be in because most classes are only offered one time a day. And you have to be put in that one class... That creates a big issue for kids that want to push themselves to go further because we can't work out schedules."

High school teachers mistakenly believe that students are receiving proper postsecondary guidance.

Increasing the number of students enrolling in and completing postsecondary will require substantial effort from across all our high schools. Yet evidence from the state's teacher survey shows that many high school teachers are not actually aware of a need for more guidance around pathways to postsecondary.

On the 2016 Tennessee Educator Survey, over 70 percent of high school teachers reported that students at their schools are "well-informed" and know how to access information regarding their postsecondary options. The same percentage of teachers also agreed that students understand how to complete the various components required during the postsecondary application process.

Eighty percent of high school teachers also reported that the majority of their schools' students are planning to go to a postsecondary education or training program. In roughly 75 percent of high schools in Tennessee, this is true—at least half of their students will enroll in a postsecondary institution following graduation. However, a real disconnect can be seen when looking at the survey responses in high schools where less than half of the high school graduates enrolled in any postsecondary institution. Even in these schools, where the majority of students did not attend postsecondary, 69 percent of teachers said the majority of their schools' students planned to attend postsecondary, and over 70 percent said that their students were well-informed about the range and level of credentials they could earn at various postsecondary institutions.

Even greater numbers of high school teachers seem to think that students are getting what they need for postsecondary and career success from their high school coursework. Most teachers (85 percent) reported that students in their schools are encouraged to take a variety of courses so they can be better prepared for postsecondary and career opportunities. Similarly, 84 percent agreed that their schools offer sufficient opportunities for students to complete rigorous coursework.

Additionally, many teachers seem unaware of the missed opportunities around early postsecondary course enrollment. On the educator survey, nearly three-quarters of teachers reported that their school's placement practices ensure all EPSO-ready students are enrolled into EPSOs. However, teachers' responses were similar across schools regardless of actual EPSO enrollment, with high percentages of teachers feeling their placement practices were appropriate in schools where two-thirds of students were enrolled and in schools where less than 20 percent of students actually took EPSO courses. On that same survey, teachers reported that student desire (as opposed to prior course grades, course prerequisites, or state assessment scores) was the main factor determining whether a student enrolled in an EPSO. Relying mostly on student motivation to determine course placement likely means that untapped

potential is being overlooked, particularly for minority and economically disadvantaged students.

High schools often operate in departmentalized silos, and it is likely that teachers assume that postsecondary information and course taking guidance is being sufficiently provided elsewhere. The first step toward promoting a stronger postsecondary-going culture in our high schools begins with awareness of existing challenges and whether or not school staff are truly engaging their students enough regarding their postsecondary and career options.

Figure 4. Percent of high school teachers who agreed with the following statements.

How Two Tennessee High Schools Have Bridged the Gap

Grainger High School *Grainger County Schools*

In 2013, around half of Grainger High School (GHS) graduates enrolled directly into postsecondary institutions. Two years later, 75 percent of students made this jump. The growth is especially impressive considering that 60 percent of the school's students are economically disadvantaged and just 11 percent of the county's over 25 population has a bachelor's degree or higher.

What changed?

"Three years ago, it was 'Oh I'm not going to go.' Then it changed from that to 'I'm going to go, but I don't know where I'm going to go.' And then last year, it was, 'I know where I'm going to go.' This year it is not just, 'I know where I'm going to go,' but it is, 'I'm applying to multiple places because I know there is a difference in financial aid depending on where I go."

That's a quote from Vicki Farrar, the Grainger County coordinator for GEAR UP TN, a grant program run by the U.S. Department of Education that aims to increase the number of low-income students succeeding in college. She serves the school's 900 students alongside two GHS school counselors, Jill Denton and Amanda Johnson. They attribute the school's postsecondary enrollment growth to a school-wide team effort, key external partnerships, and a lot of individualized student support. The group of three provides the core source of postsecondary guidance at GHS, dividing and conquering to meet goals they set for their students. Farrar has taken on the role of "FAFSA guru," while the two counselors are the "scholarship superheroes."

The school's "one kid at a time" approach begins in eighth grade when the counselors get to know students' backgrounds, interests, and aspirations. This continues into high school as they communicate with both students and parents about postsecondary milestones like ACT, college visits, and early postsecondary course taking. In the early fall of senior year, they hold individual meetings where the focus is not just on applying to college, but on finding the best fit based on interest to help ensure persistence and student ownership of the process. The counselors take advantage of every opportunity to make sure students are progressing to postsecondary, including helping students complete college applications during lunch periods and working with students before afternoon sports practices. Counselors then track key elements along the postsecondary pipeline, such as FAFSA completion, in shared spreadsheets. Students also track their own application completion by writing the names of the places where they've applied on pictures of their faces that line the walls outside the counseling office.

The school's teachers are also expected to be involved by talking with students about the importance of postsecondary, sharing their own postsecondary stories with students, and taking students on college visits. Teachers also actively participate in activities during College Application Week, like decorating doors based on careers related to the class content area. Teacher comfort with providing postsecondary and career guidance has increased through efforts to familiarize them with students' options and current admission processes. The counselor team regularly shares postsecondary information at school faculty meetings and even organized a visit day to the local community college for high school faculty.

Furthermore, GHS actively collaborates with neighboring colleges to increase awareness of options and to answer student questions throughout the application and financial aid process. The relationship with Walters State Community College is particularly strong, as it is the most frequently attended postsecondary institution for GHS graduates. GHS partners with Walters State on a number of dual enrollment courses and Walters State even offers an additional scholarship for students to complete college coursework hours while in high school.

The counselors emphasize the importance of having a primary contact at local colleges and reaching out on a regular basis, not just to ask for help, but also to ask how the high school can better prepare its students. Importantly, the relationship doesn't end once the student leaves GHS. They noted that their relationships with local colleges are key for ensuring their students experience a successful transition to postsecondary and careers by making sure students have a new "go-to person" wherever they are going. Johnson said, "I try to pass the torch to another person at whatever school they are going to."

Cane Ridge High School *Metro Nashville Public Schools*

"It starts in ninth grade." This is how Cane Ridge High School principal Michel Sanchez begins explaining the increase in postsecondary enrollment among graduates from 55 percent in 2013 to 62 percent in 2015—one of the largest increases by a large, urban high school in the state. This increase is especially meaningful given that over 75 percent of the school's 1,700 racially diverse students are economically disadvantaged, and most will be the first in their families to enroll in postsecondary.

The principal credits the school's four career-focused academies with providing students a more personalized learning experience from the time their feet hit the ground. The academies—Architecture and Construction, Arts and Communication, Health Management, and Law—connect students' high school experiences and interests with real life. Within their "mini schools," all students take a freshman seminar class that not only serves as an orientation to high school, but pushes students to start thinking about their futures and how their academic and extracurricular choices in high school will impact their plans. From there, students participate in frequent conversations about their post-graduation plans, including annual college visits starting in ninth grade, onsite career and college fairs, and guest speakers connecting postsecondary to careers.

This frequent engagement relies greatly on the school staff. Cane Ridge has six counselors divided by academies with two of the six focused specifically on ninth grade students. Metro Nashville Public Schools has site-based budgeting, which allows Cane Ridge to fund an additional counselor. The counselors are an integrated piece of students' academy experience. For example, Dr. Donna Matthews, the Health Management Academy counselor, goes on academy field trips, regularly visits students' classes, and has individual conversations with students about their high school course taking, career interests, and postsecondary options, encouraging students to take advanced courses to prepare them for the rigors of college. Matthews and the other counselors work hand-in-hand with the school's teaching staff, who are also expected to talk to students about their career options, even beginning each school year by describing their own college experiences, from application to graduation, to their students. Matthews meets weekly with the academy's teachers to discuss students' needs. By working together, the faculty take collective responsibility for students' post-high school successes.

Cane Ridge also heavily leverages community partners. The school's website lists almost 40 different community partners affiliated with the four academies, and each academy has a tie to a local university. These partnerships often lead to students earning early postsecondary credits and eventually enrolling in the institutions. For example, the Architecture and Construction program has a strong tie with Middle Tennessee State University, sending several students to their bachelor's degree program in concrete management. Additionally, student organizations, such as YMCA Latino Achievers and Health Occupations Students of America, often utilize community members as guest speakers to share success stories and even set up field trips to make these connections come to life.

The principal says that they prioritize external partnerships because hearing from someone in a job to which one is aspiring serves as a strong motivator. The school has built these relationships over time by first saying "yes" anytime someone offers their services and by being very specific about how they ask people to contribute. For example, the school welcomed assistance when the Oasis Center, a local nonprofit, offered college advisors. Now, 2 to 3 advisors are at the school 4 days per week talking to students about the college application and financial aid process via classroom visits and a help desk.

Cane Ridge also focuses strategically on building students' skills for postsecondary and career success. Students are graded on aspects of these skills like timeliness, respect, and resourcefulness each week. The principal noted that "wherever students' paths take them, certain skills like critical thinking, communication, and time management will serve them well." Emphasizing these skills, along with early and frequent communication about postsecondary and career opportunities, and academic experiences that make these opportunities relevant, help the school fulfill its mission of equipping all students with the knowledge to be productive citizens in a global society.

RECOMMENDATIONS

Tennessee has a historic opportunity to take advantage of new initiatives that offer every student access to postsecondary and career success. Yet without significant changes in what is happening in our high schools, many students will not receive the supports necessary to take advantage of these opportunities. Based on the information shared in this report, we believe there are several concrete and immediate actions that schools and districts can take to meet Tennessee's ambitious goals for postsecondary access, matriculation, and completion. Many of these steps are called out through the department's High School and Bridge to Postsecondary priority of Tennessee Succeeds. While many schools are already engaging in this work on some level, we believe that continued reflection, reinforcement, and tailoring of these action steps to meet local needs are essential to expanding and supporting the success of all students.

RECOMMENDATION ONE

Foster collective responsibility among middle and high school faculty and staff for the postsecondary preparedness of their students

Given the current student-to-counselor ratios in Tennessee, school counselors cannot serve as the sole source of information for students about course pathways and how they tie to postsecondary and career options. New school counseling standards seek to improve opportunities for school counselors by updating, clarifying, and narrowing counselors' work so that they can focus on the areas of greatest need in their schools. In order to reach all students with necessary guidance, **school leaders must find ways to broaden the pool of school personnel with the information and training to help students along the secondary-to-postsecondary pathway**. This means allowing counselors to serve as coordinators of school-wide efforts involving the entire staff—teachers, aides, principals, assistant principals—in creating a comprehensive culture of support surrounding students.

On the 2016 Tennessee Educator Survey, 95 percent of high school teachers reported that they see it as part of their jobs to prepare students to succeed in postsecondary education and training programs. However, beyond their own personal participation in a postsecondary institution and career selection, these educators have rarely received training on how to provide this type of support. Therefore, they may lack crucial knowledge about career exploration surveys, local community or technical colleges, the FAFSA, and other pertinent application deadlines. Finding ways to bridge these knowledge gaps while capitalizing on staff knowledge and translating this all into student support represents the primary challenge facing many of our schools and districts.

High school staff should have a general understanding of current and growing career fields and the pathways to entering those fields, especially regarding course placement options. This would allow them to make connections between their instructional content and knowledge needed for certain career fields. The department has provided some summer teacher externships to begin the work of supporting teachers in having informed conversations with students about their postsecondary and career options. Unless all students have regular interaction with multiple people within their schools who can help them meet crucial milestones along their postsecondary and career progressions, they will continue to miss opportunities that might have helped them along the path to success. Schools and districts also need to know more about where their students go once they leave high school. This information can then be used to adjust high school offerings and student placements, creating a feedback loop that reinforces the importance of collective responsibility.

Several ongoing department initiatives are meant to support teacher, school, and district efforts in these areas. In addition to releasing new counseling standards and offering an additional opportunity for seniors to retake the ACT, the Tennessee Department of Education and the Tennessee Higher Education Commission collaborated on a redesign of the online tool CollegeforTN.org. When families opt into using this tool, students, parents, and counselors will all share in the student's progress on key milestones—such as FAFSA completion, ACT retake,[13] and early postsecondary courses—that make postsecondary enrollment and career success more likely. In the next year, some schools will be piloting processes that allow students to select their own teacher-mentors within the system who, in turn, will be given training and access to view student progress. Similarly, the state will be partnering with schools to train counselors on college-going milestones and how engaging high school faculty and staff in the postsecondary process can effectively be scaled statewide. Finally, the department expects to release high school feedback reports this year that will allow schools and districts to dig more deeply into data on their students after graduation and to learn from patterns and trends.

RECOMMENDATION TWO

Communicate with students about their postsecondary and career options early and often

Many students reported that discussions about postsecondary options started during their junior and seniors years of high school. For the students who need guidance most, this is far too late. By this time, students will already have made a series of choices that might have eliminated certain career and postsecondary options, especially around early postsecondary enrollment and industry certification. Additionally, students might have missed potential scholarship opportunities.

The schools that are most successful in counseling students into postsecondary take steps to ensure that students are thinking explicitly about their postsecondary and career options as early as possible, often starting in middle school. These schools also have their students revisit their plans as they progress through high school. We must find ways to create structures in all of our high schools to encourage this sort of planning and ensure that student plans are informed by the range of postsecondary and career options that exist to serve all students' needs and interests.

This spring, the department launched the Career Forward Task Force to examine and explore ways to better integrate secondary, postsecondary, and workforce readiness into our education system. Task force members developed a set of guiding principles and recommendations to support the development of postsecondary and career ready students. Additionally, the task force put forward a definition of what a career ready student is in Tennessee. Several of the principles and recommendations hit on the need for frequent and earlier communication about postsecondary, noting that school counseling and advising should start in elementary school and that career exposure and experience should exist across K–12, not just in high school.

RECOMMENDATION THREE

Ensure all students have equitable access to course opportunities to increase postsecondary readiness and success

Rigorous coursework and strong teaching are significant factors in both setting students up for postsecondary and career success and increasing the possibilities of success for all students. However, for courses to be meaningful, student course planning for the four years of high school must be intentional, and schools must ensure that their course offerings align with student needs and opportunities. Students' personalized learning plans can map how students' high school courses lead to postsecondary and career opportunities. Students and counselors routinely have course enrollment conversations regarding course taking plans, but educators report that these plans are often rote formalities rather than comprehensive guiding documents that help students understand their course options and associated consequences and opportunities. On the Tennessee Educator Survey, just 50 percent of high school teachers reported that personalized learning plans exist for all students and 60 percent reported that those plans are then available to all staff who interact with the students. Faculty need access to these plans so they can ensure students' access to coursework that propels them to postsecondary and careers. Many schools have begun this practice, but systematic, clear, and continuously improving processes are needed to ensure that students are offered the right opportunities.

Schools that offer a portfolio of early postsecondary options (both in variety of courses and course types) increase the likelihood that students are prepared and have a jump-start on their postsecondary credentials. Furthermore, the benefits for economically disadvantaged students can be profound. For students who scored between 17 and 20 on the ACT, taking an early postsecondary opportunity is correlated with a higher likelihood of enrolling in postsecondary after graduation. The Career Forward Task Force suggests more offerings of dual enrollment courses and employing a co-requisite remediation option for high school students to earn postsecondary credits while in high school. A thoughtful strategy around course taking options will increase access for all students, ensuring that students will be equitably placed in courses for which they have prepared and not simply because they knew to seek out the opportunity.

Even beyond early postsecondary coursework, schools can do more to ensure that students are on the path to postsecondary and career success through careful and purposeful course enrollment. For example, students who are academically ready to take Algebra I in eighth grade need to be given these opportunities so that they are free to take higher level math courses in high school. Offered CTE programs of study should be aligned with local and regional postsecondary and occupational opportunities. Districts and schools should take steps to close programs of study that are not in alignment.

This work within schools and districts closely aligns with department strategies. *Tennessee Succeeds* calls for expanding the number of high school students earning early postsecondary credits and industry certifications and broadening the reach of these programs to include more students. Department actions include increasing opportunities for schools to offer statewide dual credit courses, fee waivers for early postsecondary exams, and more partnerships between high schools and community and technical colleges. Furthermore, the department is moving toward public reporting of attained early postsecondary credits and industry certifications at the district and school levels. Currently, the department covers the cost of statewide dual credit exams and training. The cost of partnerships between high schools and postsecondary institutions is funded through dual enrollment grant funds, which may be expanded in the future.

RECOMMENDATION FOUR

Leverage external partnerships and resources for added capacity, expertise, and influence

We face a tremendous amount of work if we are to move from where we are now—with roughly one-quarter of students receiving a postsecondary degree or credential—to a world where all students graduate from high school prepared for some form of postsecondary success. For many districts and high schools, this

shift will only take place with significant support. Tennessee is fortunate in that we have a substantial number of organizations and foundations that provide resources and personnel aimed at helping students successfully move through high school to postsecondary and into careers.

High schools that have been most successful in this regard have called on a series of external partners to supplement their own efforts. These approaches include tapping local industry partners to create access to work-based learning capstone experiences (apprenticeships, internships, and practicum experiences for course credit), participating in their regional Pathways TN initiative, and even extending the reach of school counselors by calling on the college counseling core promoted by the Ayers Foundation. Moreover, those students who choose to enroll in Tennessee Promise receive supplemental college counseling services from mentors who help students to meet deadlines around crucial postsecondary requirements. School and district leaders in schools with fewer such partnerships need to know more about where these opportunities are available and how they can learn from successes elsewhere to leverage these resources for their own students. Not every county has an Ayers Foundation and not every school can be served by GEAR UP TN or Advise TN, but we can work collectively to identify what works and encourage schools to implement promising practices. **As schools are preparing students for the jobs of tomorrow, strong community partnerships will further their students' preparation and help them to clarify their personal and career goals.**

CONCLUSION

Getting the majority of high school graduates to complete a postsecondary degree or program that leads to viable career opportunities is an ambitious, but achievable goal. No single policy or standard will ensure we reach our target, but rather comprehensive, district- and school-wide shifts toward a greater postsecondary and career focus must occur. These shifts begin with district and school leadership, including administrators and counselors, modeling the relationships that all educators should develop with their students.

It will not be enough to simply enroll more students into college. We must provide high school students with a clear understanding of the linkages between their high school experiences, postsecondary opportunities, and career aspirations. We also must equip students with the academic and social skills to persevere through postsecondary. With this improved guidance, it is fair to be optimistic that the strengths of Tennessee's students will be documented by more degrees and certificates leading to viable employment and careers.

ENDNOTES

1. Snyder, T.D., de Brey, C., & Dillow, S.A. (2016). Digest of Education Statistics 2014 (NCES 2016-006). National Center for Education Statistics, Institute of Education Sciences. Washington, DC: U.S. Department of Education.

2. On September 17, 2015, Tennessee was one of 16 states awarded a federal Statewide Longitudinal Data Systems FY15 grant (Award number: R372A150015). For more information, see: http://nces.ed.gov/programs/slds/grant_information.asp

3. Daly, M. C., & Bengali, L. (2014). Is it still worth going to college? FRBSF Economic Letter. San Francisco, CA: Federal Reserve Bank of San Francisco.

4. Students who participated were mostly in tenth and eleventh grade.

5. For more information, see the American School Counselor Association's guiding framework document at: http://schoolcounselor.org/asca/media/asca/ASCA%20National%20Model%20Templates/ANMExecSumm.pdf

6. For more information, see: https://www.tn.gov/sbe/topic/bep.

7. The Tennessee Educator Survey is an annual survey administered by the department in conjunction with the Tennessee Education Research Alliance at Vanderbilt University. This survey solicits feedback on the issues affecting classrooms and schools from school administrators, teachers, and other pertinent staff (e.g., counselors).

8. In April of 2016, The Education Trust, a national non-profit advocacy organization, conducted an analysis of a national sample of 2013 high school graduates' transcripts and found that only one-third of high school graduates graduated having taken a "college-ready curriculum." Their college-ready curriculum list of courses was almost identical to Tennessee's core academic graduation requirements (e.g., four English courses, three science courses, two foreign language courses, etc.), with the main difference being that Tennessee requires four math courses instead of Ed Trust's three. The finding that so many students across the nation are exiting high school without having (what Tennessee considers to be) required high school courses was startling and led the department to investigate how our students fared in comparison.

9. Students not planning to attend a university can waive out of the foreign language requirement. Due to data restrictions we could not account for waivers in this analysis. As such, students who appear to be missing a foreign language may have waived out of this requirement.

10. Tennessee high school graduation requirements mirror course admissions requirements for most four-year institutions.

11. While teacher shortages in certain areas such as foreign language might contribute to this issue, nearly all of the schools where students are missing requirements offered these courses during the relevant years.

12. Cowan, J. & Goldhaber, D. (2015). How much of a "running start" do dual enrollment programs provide students? *The review of higher education*:*38* (3). Pp 425-460; An, B.P. (2013a). The impact of dual enrollment on college degree attainment: Do low-SES students benefit? *Educational Evaluation and Policy Analysis, 34*(1). Pp. 57-75; An, B.P. (2013b). The influence of dual enrollment on academic performance and college readiness: Differences by socioeconomic status. *Research in Higher Education, 54*(4), 407-432.

13. For more information, see: http://tn.gov/assets/entities/education/attachments/ccte_ACT_retake_guide.pdf?mc_cid=d160d6d310&mc_eid=3522832473

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