TENNESSEE HIGHER EDUCATION COMMISSION

Agenda Item: II.B.

DATE: January 26, 2012

SUBJECT: Lottery Scholarship Annual Report

ACTION RECOMMENDED: Information

BACKGROUND INFORMATION: Pursuant to T.C.A. § 49-4-903(b), the Tennessee Higher Education Commission annually reports findings related to the Tennessee Education Lottery Scholarship (TELS) programs to the Senate and House Education Committees at the beginning of each legislative session.

Staff will present an overview of a lottery scholarship special report, which for the first time provides detailed information on five programs within the lottery scholarship family of programs that are smaller, both in terms of students served and dollars expended:

- Dual Enrollment Grant;
- HOPE Foster Care Grant;
- Helping Heroes Grant;
- Math and Science Teacher Loan Forgiveness Program; and
- Rural Health Loan Forgiveness Program.

The report provides analysis of participant demographics; scholarship renewal and student progression; and, where possible, graduation rates.

2012 Tennessee Education Lottery Scholarship Special Report:

An examination of grant and loan forgiveness programs for special populations

A report from the Policy, Planning, and Research Division of the Tennessee Higher Education Commission

TENNESSEE HIGHER EDUCATION COMMISSION MEMBERS
2011-12

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History

The Tennessee Higher Education Commission was created in 1967 by the Tennessee General Assembly to achieve coordination and foster unity with regard to higher education. The Commission coordinates two systems of public higher education: the University of Tennessee institutions governed by the University of Tennessee Board of Trustees, and the state universities, community colleges, and technology centers governed by the Tennessee Board of Regents.

There are currently nine public universities, 13 community colleges, and 27 technology centers in Tennessee that serve over 256,500 students collectively. The Commission is composed of nine lay members appointed by the Governor for six year terms representing congressional districts of the State, three Constitutional Officers who are ex-officio voting members (Comptroller of the Treasury, State Treasurer, and Secretary of State), two ex-officio student members who serve two year terms, and the Executive Director of the State Board of Education as an ex-officio non-voting member.

Mission

The Tennessee Higher Education Commission (THEC) was created in 1967 by the Tennessee General Assembly (TCA 49-7-202) for the purpose of coordinating and supporting the efforts of post-secondary institutions in the State of Tennessee. One of its statutory requirements is to create a master plan for the development of public higher education in Tennessee.

The mission for Tennessee's twenty-first century system of higher education is to elevate the overall educational attainment of citizens in the State through increased accessibility to mission-focused institutions, which deliver educational services on campus, as well as through a planned network of off-campus instruction and to prepare citizens responsibly for success in the new century by providing high quality teaching and research in an environment that serves the needs of its consumers.

CONTENTS

EXECUTIVE SUMMARY

Dual Enrollment Grant

- Dual Enrollment Grant participants have higher high school GPA's and the same average composite ACT score as Tennessee Education Lottery Scholarship (TELS) recipients.[1] They also require less remedial and/or developmental learning support
- As a result, Grant recipients graduate from college at a higher rate.
- Enrollment is largely influenced by the proximity of participating institutions.
- Tennessee Board of Regents community colleges host the highest percent of Dual Enrollment Grant students.
- The number of program participants has increased every year, from 5,359 in 2005-06 to 13,747 in 2010-11.

HOPE Foster Care Grant

- Recipients are more likely to need remedial and developmental learning support, take fewer credit hours, and drop out at higher rates than TELS recipients.
- Foster Care Grant recipients' high school GPA's and composite ACT scores are at or above the state average, though lower than TELS recipients, on average.
- Like standard TELS recipients, Foster Care Grant recipients are most likely to go to a Tennessee Board of Regents university; however, they are more likely to attend community colleges than their TELS counterparts.

Helping Heroes Grant

- The majority of these grant recipients are male (88 percent in 2010) and earn below $36,000 annually.
- High school GPA's and ACT scores for Grant recipients are lower than those for TELS recipients, and Grant recipients are more likely to need remedial and/or developmental learning support.
- Participants have increased steadily each year, which could be attributed to an institutional focus on veteran students.

Math & Science Teacher Loan Forgiveness Program

- Program participation is steadily decreasing.
- The majority of students work while enrolled.
- The average student is 35 years old, Caucasian, and a female pursuing a master's degree.
- Ninety-one percent of program participants are master's students; nine percent are doctoral students.

[1] TELS recipients include recipients of HOPE, GAMS, ASPIRE, and ACCESS

Rural Health Loan Forgiveness Program

- The Rural Health Loan Forgiveness Program is a five year pilot program, which will admit its final cohort in 2012-13.
- A majority of recipients are Caucasian females; however, the program has seen minority student participation increase in recent years.
- Since the program's inception 120 students have participated.
- Enrollment is concentrated at TICUA institutions.

PURPOSE OF THE REPORT

Comprising eleven financial aid programs, the Tennessee Education Lottery Scholarship (TELS) provided financial aid to 101,569[2] students at a cost of $297,589,674 in 2010-11 (Tennessee Student Assistance Corporation [TSAC], 2011). The four largest programs (the HOPE scholarship program, the General Assembly Merit Scholarship program [GAMS], the ASPIRE award, and the Tennessee HOPE ACCESS Grant), which are referred to colloquially as the Hope Scholarship program, account for 74 percent of the students and 89 percent of TELS expenditures. There is a growing body of research[3] focusing on these four programs, including an annual fact book published by the Tennessee Higher Education Commission (THEC).[4] However, research on the smaller TELS programs remains scant.

This report provides a descriptive overview of five of the smaller TELS programs, including: the Dual Enrollment Grant, the HOPE Foster Grant, the Helping Heroes Grant, the Math & Science Teacher Loan Forgiveness program, and the Rural Health Loan Forgiveness program. The goal of this report is to provide legislators, policymakers, and researchers with a basic understanding of these five TELS programs and the students they serve. Specifically, the report examines the number of students served by each program, their demographics, academic preparation, postsecondary enrollment trends, and their postsecondary progression and success. Additionally, it highlights some of the data challenges that were identified by the researchers. The report is broken into five sections, covering each of the five programs. The two appendices discuss data limitations and present more detailed data tables, respectively.

[2] Represents duplicate counts, because a student may attend more than one institution in an academic year

[3] Several studies can be found on the THEC Policy, Planning, and Research website: http://thec.ppr.tn.gov/THECSIS/Lottery/Lottery.aspx

[4] The annual fact book can be found at: http://www.tn.gov/thec/Legislative/Reports.html

OVERVIEW OF PROGRAMS INCLUDED IN THE REPORT

Table A presents the number of students served and total cost of all Tennessee Education Lottery Scholarship (TELS) programs since inception.[5] Since 2004, TELS has served 526,614 students and has provided almost $1.5 billion for postsecondary students in financial aid. The three largest programs, HOPE, GAMS, and ASPIRE accounted for 70 percent of the students served and almost 91 percent of the programs' total expenditures.

This report is limited to the programs denoted by italics in the table below. These five programs account for 13.4 percent (70,704 students) of TELS students and 2.3 percent ($33.5 million) of TELS expenditures. The programs provide grants and loans eligible for forgiveness to sub-special populations of students participating in Tennessee postsecondary education. The sections that follow provide an overview of the programs' history, the students that they serve, and their success.

Table A: Tennessee Education Lottery Scholarship (TELS) participants and allocation since inception* by program

	Students Served	Dollars Awarded	% of TELS Students Served	% of Dollars Awarded
HOPE GAMS ASPIRE	included in Subtotal			
Subtotal (HOPE, GAMS, ASPIRE)	369,041	$ 1,354,491,206	70.08%	90.96%
HOPE ACCESS Grant	2,255	$ 4,644,032	0.43%	0.31%
HOPE Non-Traditional	7,790	$ 18,268,706	1.48%	1.23%
Wilder-Naifeh Grant	76,824	$ 78,248,339	14.59%	5.25%
HOPE Foster Care Grant	163	$ 624,674	0.03%	0.04%
Dual Enrollment Grant	69,188	$ 29,806,925	13.14%	2.00%
Math & Science Teachers Loan Forgiveness	103	$ 199,000	0.02%	0.01%
Helping Heroes Grant	1,130	$ 1,558,856	0.21%	0.10%
Rural Health Loan Forgiveness	120	$ 1,272,767	0.02%	0.09%
Total	526,614	$ 1,489,114,505	100.00%	100.00%

Source: Tennessee Student Assistance Corporation (TSAC) year-end report

* Not all programs began in the same year, which effects each programs percent of total students served and total dollars awarded

[5] Not all programs began in the same year

DUAL ENROLLMENT GRANT

The Dual Enrollment Grant program, funded by net proceeds from the Tennessee Education Lottery Corporation, provides financial assistance for students to begin working toward a college degree while still pursuing their high school diploma. The program allows eligible high school junior and seniors to enroll in one lower division college course per semester. Students may enroll in an additional lower division course per semester if they meet the HOPE scholarship eligibility criteria (at least a 3.0 high school GPA or a 21 on the ACT). Students may take a total of four lower division courses while in high school under the grant. Any additional courses paid for as a part of the Dual Enrollment Grant program will result in a reduction of the student's HOPE scholarship on a dollar for dollar basis.

The Grant provides $300 per course per semester with the total amount not to exceed $600 per semester ($1,200 per academic year). Courses taken as a part of the Grant program will not count against a student's 120 semester hour cap, nor the five years limitation imposed by the Tennessee Education Lottery Scholarship (TELS) program.

Eligibility Requirements

To be eligible[6] to participate in the program, a student must meet the following criteria:

- Tennessee resident
- Enrolled in an eligible high school
- Admitted to and enrolled in an eligible postsecondary institution
- Completed all 10th grade academic requirements, and be classified as an 11th or 12th grader
- Apply for the grant in junior or senior year of high school
- Not be in default on a federal Title IV educational loan or a Tennessee educational loan
- Not owe a refund on a federal Title IV financial aid program or a Tennessee financial aid program
- Not be incarcerated
- Not have already received a high school diploma or a GED
- Comply with United States Selective Service requirements
- Renew the Grant application each term enrolled
- Maintain a cumulative 2.75 GPA in dual enrollment classes to retain the award

[6] Eligibility criteria can be found on TSAC's College Pays website: www.tn.gov/collegepays

Program History

Table 1 presents the number of students served and the total dollars awarded since the program's inception. Since 2005-06, 59,685 students[7] have participated in the program. Additionally, the program has experienced exponential growth since 2005-06 (256 percent), with 13,747 students participating in the most recent year.

Table 1: Dual Enrollment Grant Recipients and Dollars Awarded, 2005-06 to 2010-2011

Academic Year	Total Students Served°	Unduplicated Student Count*	Average Award per Student†	Total Dollars Awarded†
2005-06	5465	5359	$377	$2,060,356
2006-07	8306	7462	$434	$3,600,922
2007-08	10931	9332	$440	$4,804,910
2008-09	13383	11483	$432	$5,776,906
2009-10	14697	12302	$433	$6,369,217
2010-11	16404	13747	$439	$7,194,005
Total	69186	59685	$431	$29,806,316

Source: Tennessee Student Assistance Corporation (TSAC)
° Student counts include duplication
* Unduplicated count across years
† Calculated using Total Students Served

The growing interest in the program has probably been influenced by a variety of factors, one of which is the low cost of earning college credits. For instance, several participating postsecondary institutions in Tennessee only charge Dual Enrollment Grant students a tuition amount that is equal to the amount funded by the grant program, meaning students can earn college credits at a cost of $300 per class[8], totally state-subsidized. Furthermore, because the grant amount per class has not increased over the life of the program, the cost of completing college courses through the Dual Enrollment Grant program has actually decreased when inflation is taken into account for students attending institutions that limit tuition charges to the amount of the grant.

At a time when college costs continue to outpace inflation and median family income (College Board, 2011a), and students and their families are responsible for paying a larger portion of the cost of college (College Board, 2011b), the data suggest that the ability to earn college credits at a reduced cost is an attractive option for Tennessee high school students. Additionally, in 2010,

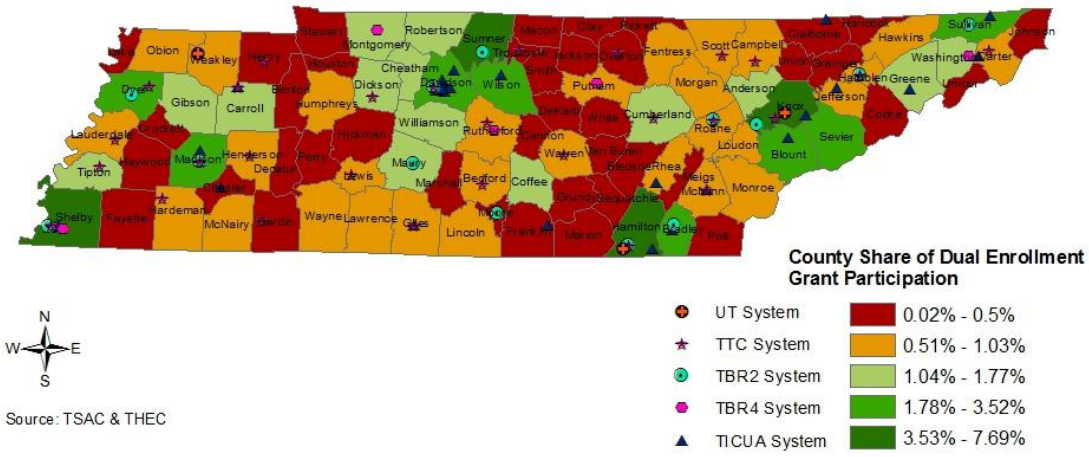
[7] This is an unduplicated count of students within and across years.
[8] See Table B-2 in Appendix B for a list of schools' costs per three hour class.

the Tennessee General Assembly passed legislation (SB2008) that expanded the number of classes students are eligible to take while enrolled in the program.

Secondary Participation

Figure 1 shows each county's share of total Dual Enrollment Grant participation.[9] The figure also displays the location of the State's postsecondary institutions. Counties with the highest Dual Enrollment Grant participation, such as Knox, Shelby, and Hamilton, typically have large cities and postsecondary institutions located within their borders. The inverse is also true. The magnitude of participation in the Dual Enrollment Grant program is related to students' proximity to an eligible postsecondary institution. This reality could have negative implications for the segments of the state population that do not have access to these same educational opportunities, as is evidenced by the low participation counties in Figure 1.

Figure 1: Dual Enrollment Grant Participation by County, 2005-06 to 2010-11



For example, there is a moderate positive correlation (r^2 = .386) between a county's Dual Enrollment Grant share and its college going rate. Students that do not live in proximity to an eligible postsecondary institution have one less avenue to explore their postsecondary ambitions. One solution to this problem may be allowing Dual Enrollment Grant students in counties without a postsecondary institution to participate in the Dual Enrollment Grant program through the Regents Online Degree Program (RODP). With the adoption of the articulation and transfer agreement, students may be able to accumulate credits that would transfer to a two- or four-year public institution, potentially shortening their time to degree.

[9] The percentages for each county can be found in Table B-1 in *Appendix B*

Another solution may be expanding the number of Dual Enrollment programs that occur on a high school campus. Currently, some high schools bring Dual Enrollment faculty to their campuses in order to offer Dual Enrollment classes to their students. Given sufficient resources, these programs may be able to be expanded to counties with no postsecondary institution.

Table 2 presents each postsecondary system's share of Dual Enrollment Grant program activity. The table shows that a majority of Grant recipients are enrolled at community colleges. It also tells a story similar to Figure 1, in that the percentage of Dual Enrollment Grant students enrolled at Tennessee's Technology Centers (TTCs) may be driven by the fact that two-thirds of the TTCs are the only public postsecondary institution in the county in which they are located.

Table 2:
Dual Enrollment Grant participation by system

System	Percent of total
TBR Universities	5%
TBR Community Colleges	66%
UT Institutions	8%
TICUA Institutions	12%
Tennessee Technology Centers (TTC)	10%
Total	100%

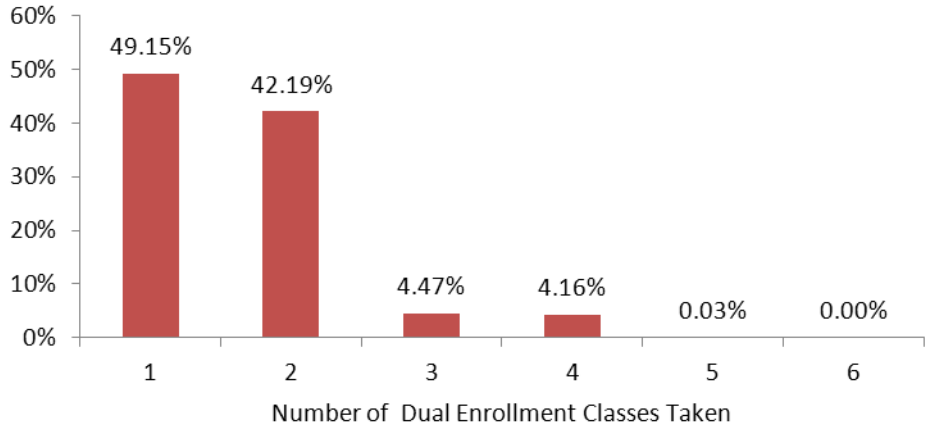
Notes: represents unduplicated students both within and across years.
Excludes students with missing data.

Furthermore, **Table B-3** in *Appendix B* shows 86 percent of the Grant recipients enrolled at TTCs in 2010 were concentrated at ten TTC campuses, eight of which were the only public institution in their county. These eight campuses accounted for 66 percent of TTC Dual Enrollment Grant population. Additionally, in the five counties where a public university was also present (Hamilton, Knox, Rutherford, Shelby, and Davidson), the TTC campuses accounted for only 15 percent of TTC Grant recipients, with Davidson accounting for 12 percent. The TTCs in Hamilton, Knox, and Rutherford only enrolled a combined three students in 2010.

Figure 2 shows the distribution of the number of classes taken by Dual Enrollment Grant recipients while participating in the program. Almost half of all Dual Enrollment Grant participants take only one class while enrolled in the program, and 91 percent take two or fewer classes. The data suggest that students participating in the Dual Enrollment Grant

program, while obtaining some college credit, are not obtaining enough credits to significantly reduce their time-to-degree.[10]

Figure 2: Distribution of Dual Enrollment Classes Taken by Dual Enrollment Grant Recipients, 2005-2010



However, the legislation (SB2008) passed by the Tennessee General Assembly in 2011, which allows Dual Enrollment Grant students to take an additional class per semester, offers students the opportunity to accumulate more than a semester's worth of college credit subsidized by the State while the student is still enrolled in high school. Future research is needed to examine the impact of the legislation on Dual Enrollment Grant students' time-to-degree.

Demographics

Table 3 compares the demographics of students that participated in the Dual Enrollment Grant program with students that participated in Tennessee Education Lottery Scholarship (TELS) programs (HOPE, GAMS, ASPIRE, ACCESS) by year. Specifically, the table compares Dual Enrollment Grant students and TELS students by gender, ethnicity, and adjusted gross income. While the gender distributions for students in both programs essentially mirror each other, Dual Enrollment Grant students are more likely to be minority students and come from families with lower adjusted gross incomes than their TELS counterparts.

[10] Other state programs, such as Minnesota's *Postsecondary Enrollment Options* program (http://education.state.mn.us/MDE/StuSuc/CollReadi/index.html), allow students to take a full course load at participating postsecondary institutions.

Table 3:

2005 - 2010 Dual Enrollment Grant recipients' demographics compared to FTF TELS recipients*

			2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
Gender	Dual Enrollment Recipients	Female	59%	61%	61%	60%	60%	61%
		Male	41%	39%	39%	40%	40%	39%
	TELS Recipients*	Female	60%	60%	59%	59%	59%	59%
		Male	40%	40%	41%	41%	41%	41%
Race	Dual Enrollment Recipients	African American	5%	4%	5%	8%	9%	9%
		Caucasian	90%	90%	89%	85%	78%	83%
		Other	5%	6%	6%	7%	13%	8%
	TELS Recipients*	African American	9%	9%	9%	9%	10%	10%
		Caucasian	87%	87%	86%	86%	85%	84%
		Other	4%	4%	5%	4%	5%	5%
% with at least one parent with an Associate's degree or higher	Dual Enrollment Recipients		99%	99%	99%	99%	99%	NA
	TELS Recipients*		62%	63%	63%	64%	63%	64%
Adjusted Gross Income	Dual Enrollment Recipients	$12000 or less	7%	7%	7%	7%	7%	NA
		12,001-24,000	8%	9%	9%	8%	10%	NA
		24,001-36,000	9%	9%	10%	10%	10%	NA
		36,001-48,000	10%	9%	9%	9%	9%	NA
		48,001-60,000	10%	10%	10%	10%	10%	NA
		60,001-72,000	10%	10%	10%	10%	9%	NA
		72,001-84,000	9%	10%	10%	9%	9%	NA
		84,001-96,000	9%	9%	8%	8%	8%	NA
		over $96,000	28%	29%	29%	29%	29%	NA
	TELS Recipients*	$12000 or less	6%	6%	6%	6%	7%	8%
		12,001-24,000	8%	8%	8%	8%	8%	10%
		24,001-36,000	10%	10%	9%	9%	9%	10%
		36,001-48,000	10%	9%	9%	8%	8%	9%
		48,001-60,000	11%	10%	9%	9%	8%	9%
		60,001-72,000	10%	10%	10%	9%	9%	9%
		72,001-84,000	10%	10%	9%	9%	9%	8%
		84,001-96,000	9%	9%	9%	8%	8%	8%
		over $96,000	26%	29%	32%	33%	34%	31%

Notes: Excludes students with missing data by category; NA = Not Available.

The 2010 cohort of Dual Enrollment Grant recipients still may have students enrolled in high school because both juniors & seniors are eligible.

* TELS recipients include: HOPE, GAMS, ASPIRE, and ACCESS

One finding, not heretofore discovered, is that virtually all Dual Enrollment Grant recipients come from families where at least one parent has a college education. This compares to TELS recipients at large, where the share of scholarship recipients from such families is still high (two-thirds), but far below the percentage for Dual Enrollment grantees. This finding supports previous research that there is a relationship between parental educational attainment and postsecondary academic preparation.

Because middle- and low-income and minority students are traditionally underrepresented in higher education, these populations' healthy representation in the Dual Enrollment Grant program is encouraging from a state perspective. For example, the program offers a low-cost option (both for the state and the students) for these underrepresented students to explore their postsecondary options. This exploratory process may allow students with limited prior knowledge of postsecondary education to determine what type of postsecondary institution is an appropriate fit for pursuing their educational and occupational goals.

Academic Preparation

In order to participate in the Dual Enrollment Grant program, students are required to meet the admissions criteria specific to Dual Enrollment Grant students at the postsecondary institution they attend.[11] To take more than one course per semester, students must meet the HOPE scholarship eligibility criteria (3.0 high school GPA or 21 ACT). While their admission to a postsecondary institution suggests that these students are academically prepared to succeed in college, this conclusion is further corroborated by their high school academic performance.

Table 4 shows that the level of high school academic performance of Dual Enrollment Grant recipients largely mirrors the high school academic performance of TELS recipients. However, the groups differ on two likely related measures: the percentage of students meeting both HOPE scholarship eligibility criteria and the percentage of students taking at least one remedial and developmental (also referred to as "learning support") course. Additionally, on average, Dual Enrollment Grant recipients' high school GPA is higher than that of their TELS counterparts.

Previous research has shown that TELS recipients meeting both eligibility criteria progress and graduate with the scholarship intact at a higher rate than students meeting just one of the criteria (Tennessee Higher Education Commission, 2011a). Similarly, students that meet both criteria maintain a higher college GPA than students that only met one of the eligibility criteria. While college GPA is not a holistic measure of academic preparedness, there is an intuitive relationship between the two, and it represents THEC's best proxy.

[11] These requirements can be different for Dual Enrollment Grant students and traditional students.

Furthermore, the table shows that fewer Dual Enrollment Grant recipients need remediation compared to the TELS population, providing additional evidence of their academic preparedness. Interestingly, the difference between the percentage of Dual Enrollment Grant and TELS students that meet both criteria (6 percentage points) and the difference in the percentage of students that need remediation/learning support (7 percentage points) is almost equal.

Table 4: Academic preparation of Dual Enrollment Grant students vs. TELS students since both programs' inception

	Dual Enrollment	**TELS***
Average High School GPA	3.61	3.42
Average Composite ACT Score	23	23
% Meeting at least ***one*** TELS Qualification	94%	100%
% Meeting ***both*** TELS Qualifications	66%	60%
Of students that Qualified For TELS, % Qualifying for HOPE	92%	95%
Of students that Qualified For TELS, % Qualifying for GAMS	8%	5%
% Taking at least one Remedial or Developmental Learning Support Course	12%	19%

Notes: Table represents unduplicated headcounts
Table excludes students with missing ACT or High School GPA data.
Only includes Dual Enrollment Students that have enrolled in a public postsecondary institution (or a private institution if they received a lottery scholarship) after they have graduated from High School
* TELS recipients include: HOPE, GAMS, ASPIRE, and ACCESS

Finally, more detailed presentations of Dual Enrollment Grant students' high school academic performances can be found in **Figure B-1** and **Figure B-2** in *Appendix B*. **Figure B-1** shows the distribution of Dual Enrollment Grant recipients' weighted high school GPAs, and **Figure B-2** presents the distribution of Dual Enrollment Grant recipients' composite ACT scores.

Postsecondary Participation

Table 5 presents the college-going rates of Dual Enrollment Grant recipients by their cohort year, defined as the first year in which they received a Dual Enrollment Grant. The table shows that once a cohort has had adequate time to enroll, the percentage of recipients that goes on to enroll in postsecondary education reaches over 90 percent. Additionally, if THEC currently had the ability to check for out-of-state postsecondary participation, the rate may exceed 95 percent.[12]

The low college-going rate in 2009 is probably a product of the limited amount of time that has passed since these students began participation in the program. Technically, students in this cohort could have graduated high school as recently as spring of 2011.[13] The college-going rates for this cohort likely will increase over time, which will be shown as THEC receives additional enrollment data for each academic year.[14]

Table 5:
College-going rate of Dual Enrollment Grant recipients by cohort year

Dual Enrollment cohort academic year	Beginning Cohort°	Enrolled in a TN post-secondary institution* as of the 2010-11 academic year	College-going Rate
2005-06	5270	4896	92.9%
2006-07	7335	6726	91.7%
2007-08	9111	7577	83.2%
2008-09	10470	8701	83.1%
2009-10	10691	6305	59.0%
Total	42877	34205	79.8%

° Excludes students with missing data

* Analysis is limited to students that were enrolled by the 2010 academic year at a TN public institution or students enrolled at a TN private institution that received a lottery scholarship. The 2010 cohort is not included, because part of the cohort may not have graduated from high school yet.

[12] Currently, THEC does not collect first name, last name, and date of birth from the systems. However, we will be receiving this information from the systems beginning in the 2012 academic year. Doing so will allow us to check postsecondary enrollment across state borders through the National Student Clearinghouse: http://www.studentclearinghouse.org/

[13] The Dual Enrollment Grant program is open to juniors and seniors in high school, and the cohort year is determined by the first year that a student participates in the program. Meaning, juniors in high school are counted in the cohort year counts.

[14] Presently, THEC's student information system (SIS) only has enrollment information for the 2010-2011 academic year.

Table 6 shows where these students are enrolling by postsecondary education system after they graduate from high school. The enrollment distribution of grant recipients once they have left high school does not follow the same pattern as their enrollment while they participated in the program. Specifically, the distribution is more evenly distributed across sectors, with 25 percent of students choosing to enroll at a community college, compared to 66 percent while they were participating in the program (see **Table 2**). The enrollment distribution of Grant recipients once they enrolled in college after graduating from high school is more similar to the distribution of TELS recipients. Given the similarity of Dual Enrollment Grant recipients' high school academic performance relative to TELS recipients, it seems reasonable to expect these distributions to be similar.

Table 6:
Distribution of Dual Enrollment Grant recipients eventual postsecondary choices by system from 2005-06 to 2009-10

System	Number of Students*	Percent	2009-10 TELS Recipients°
TBR Universities	8929	26%	27%
TBR Community Colleges	8453	25%	22%
UT Institutions	9160	27%	21%
TICUA Institutions	5498	16%	15%
TN Technology Centers	2239	7%	15%
Total	34279	100%	100%

* Total count of students does not equal count in Table 5, because some students were enrolled in multiple institutions in their first semester
° Source: (THEC, 2011a)

Table 7 displays the average credit hours attempted by Dual Enrollment Grant students in their first semester.[15] Across all sectors, former Dual Enrollment Grant recipients on average took at least 12 hours, which is considered full-time. In fact, 99 percent of former Dual Enrollment Grant graduates at Tennessee public and private institutions were enrolled full-time during their first semester in college, defined as taking 12 or more credit hours. Furthermore, Dual Enrollment Grant recipients' attempted hours are similar to their TELS counterparts. However, recipients that enrolled in community colleges enrolled in fewer credits on average than their TELS counterparts.

[15] One of the data challenges the researchers faced was defining when a Dual Enrollment Grant student was a first-time freshman. As a result, throughout the report, Dual Enrollment Grant students postsecondary cohorts are defined by the fall semester following the year students graduated from high school.

Table 7:
Average credit hours attempted by former Dual Enrollment Grant recipients in their first semester* compared to TELS first-time freshmen (FTF) by system and cohort year

	Former Dual Enrollment Grant Recipients					TELS FTF
	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
TBR Universities	14.5	14.5	14.4	14.4	14.3	14.4
TBR Community Colleges	10.7	10.4	12.2	12.1	11.9	12.9
UT Institutions	14.1	14.4	14.4	14.6	14.6	14.9
TICUA Institutions	14.9	14.3	15.0	15.1	15.1	15.2
Average	13.3	13.1	14.0	14.0	13.9	14.4

*Dual Enrollment Grant students' postsecondary cohorts are defined by the fall semester following the year they graduated from high school

Postsecondary Progression & Success

Table 8 shows how successfully Dual Enrollment Grant students have progressed in college. Specifically, the table shows the percentage of recipients that accumulated at least 24, 48, 72, or 96 credit hours[16] by 2010-11, starting with the most recent dual enrollment cohort year. Eight out ten Dual Enrollment Grant recipients accumulate 48 credits, which is equivalent to finishing two years of college. Additionally, over sixty percent finished the equivalent of four years of college. Dual Enrollment Grant recipients are progressing through college at high rates, and the rates have remained consistent across cohort years. These consistent high progression rates provide additional evidence of the high level of high school academic preparation of Dual Enrollment Grant students.

Table 9 shows that, in addition to their high progression rates, Dual Enrollment Grant students are maintaining above-average college GPAs after accumulating 24 credit hours. The average GPA of these students is well above the required 2.75 for renewal of TELS scholarships. As with the progression rates, the average GPA has remained consistent across systems and cohort years.

[16] Credit hour accumulation is one of the measures utilized by THEC's new outcomes based funding formula. Each of the credit hour bench marks is essentially a proxy for one year of full-time enrollment (the completion of 12 credit hours a semester).

Table 8:
Percentage of former Dual Enrollment Grant recipients completing at least 24, 48, 72, and 96 hours by 2010-11 by system and cohort year

Accumulated at Least 24 hours				
	2005	2006	2007	2008
TBR Universities	92%	91%	91%	87%
TBR Community Colleges	77%	76%	76%	76%
UT Institutions	94%	94%	94%	92%
TICUA Institutions	92%	91%	85%	67%*
Total	*88%*	*87%*	*87%*	*82%**

Accumulated at Least 48 hours				
	2005	2006	2007	2008
TBR Universities	85%	82%	80%	NA
TBR Community Colleges	63%	63%	58%	NA
UT Institutions	89%	88%	85%	NA
TICUA Institutions	86%	83%	73%*	NA
Total	*80%*	*79%*	*75%**	*NA*

Accumulated at Least 72 hours				
	2005	2006	2007	2008
TBR Universities	77%	75%	NA	NA
TBR Community Colleges	47%	45%	NA	NA
UT Institutions	83%	80%	NA	NA
TICUA Institutions	79%	70%*	NA	NA
Total	*71%*	*67%**	*NA*	*NA*

Accumulated at Least 96 hours				
	2005	2006	2007	2008
TBR Universities	71%	NA	NA	NA
TBR Community Colleges	36%	NA	NA	NA
UT Institutions	75%	NA	NA	NA
TICUA Institutions	68%*	NA	NA	NA
Total	*62%**	*NA*	*NA*	*NA*

Notes: NA = Not Available
*THEC currently does not have Spring 2010 enrollment data for TICUA institutions, which affects these percentages. Students that received an associate's degree that did not pursue a bachelor's degree may not be included in the numerator of the community college counts for the number of students accumulating 72 or 96 hours, making their percentages lower than they should be.

Table 9:
Average GPA of former Dual Enrollment Grant recipients by cohort year in the semester that they passed 24 earned credit hours

	2005	2006	2007	2008	2009
TBR Universities	3.1	3.1	3.1	3.1	3.1
TBR Community Colleges	3.1	3.1	3.1	3.1	3.1
UT Institutions	3.2	3.2	3.2	3.1	3.1
TICUA Institutions	3.4	3.3	3.4	3.4	3.5
Total	3.2	3.2	3.2	3.2	3.2

Lottery Scholarship Participation & Progression

Table 10 presents the counts and percentage of Dual Enrollment Grant students that eventually received a TELS scholarship, by their cohort year. Across all cohort years, 93 percent of Dual Enrollment Grant students that enrolled in a postsecondary institution received a TELS scholarship. These findings closely mirror the percentage of Dual Enrollment Grant students that were estimated to be lottery-eligible using weighted high school GPAs and composite ACT scores in the *Academic Preparation* section.

Additionally, the percentage has increased incrementally every year since the inception of the Dual Enrollment Grant program. This growth has occurred as the number of students qualifying has also increased. These trends suggest that the growth in the Dual Enrollment Grant population has not come at the cost of the level of academic preparation of Dual Enrollment Grant students.[17]

[17] If the growth in the percentage of students qualifying for TELS scholarships had occurred based on high school GPA, and the non-Dual Enrollment Grant TELS population experienced similar growth, an argument could be made that these increases may be a symptom of grade inflation. However, preliminary analyses showed that there has been little variation in the percentage of students qualifying for a TELS scholarship regardless of eligibility criteria met in the last two years.

Table 10: Percentage of former Dual Enrollment Grant recipients that received TELS* by cohort year

Dual Enrollment Cohort Year	Beginning Cohort°	Lottery Recipients	% Received Lottery
2005	4306	3882	90%
2006	5975	5488	92%
2007	7374	6894	93%
2008	8473	7946	94%
Total	26128	24210	93%

* Includes: HOPE, GAMS, ACCESS, & ASPIRE

° Differences in cohort counts from Table 5 are because TTC counts are not included

Table 11 presents the distribution of Dual Enrollment Grant students that received a lottery scholarship by TELS program. Compared to TELS first-time freshmen (FTF) in 2010, Dual Enrollment Grant students are overrepresented in the percentage of students who qualified for the General Assembly Merit Scholarship (GAMS) program. One of the original intents of the GAMS program was to incentivize Tennessee's best and brightest students to enroll in a postsecondary institution within the State by providing eligible students with an additional $1,000 supplement on top of the HOPE base award amount.

Table 11: Distribution of Dual Enrollment Grant students that received TELS, by scholarship program compared to 2010-11 TELS first-time freshmen (FTF)

	Former Dual Enrollment Grant Recipients				TELS FTF
	2005-06	2006-07	2007-08	2008-09	*2010-11*
HOPE	66.7%	67.4%	67.6%	66.9%	*66%*
GAMS	9.2%	8.4%	8.3%	8.5%	*5%*
ASPIRE	23.6%	23.9%	23.7%	24.2%	*28%*
ACCESS	0.4%	0.4%	0.5%	0.4%	*1%*
Total	100%	100%	100%	100%	*100%*

Note: FTF = First-time Freshmen

In order to qualify for GAMS, a student must have a minimum 3.75 high school GPA *and* a 29 composite ACT score. The success of the Dual Enrollment Grant program in attracting GAMS-eligible students may present an opportunity for institutions to leverage the program in order to attract Tennessee's academically highest performing students to remain at their institution and in Tennessee. Future research is needed to examine how institutions are currently

integrating and utilizing the Dual Enrollment Grant program to meet their enrollment and completion goals.

Just as Dual Enrollment Grant students' higher level of academic preparation resulted in higher persistence rates, **Table 12** shows that the same trends occur for scholarship renewal. The average renewal rates for Dual Enrollment Grant students were 10 percentage points higher than the renewal rates of their 2009 TELS FTF peers, with differences between the two groups concentrated within the HOPE and ASPIRE scholarship programs.

Table 12: 2nd year TELS renewal rates for Dual Enrollment Grant recipients compared to 2009 TELS FTF by cohort year

	Former Dual Enrollment Grant Recipients			TELS FTF
	2005-06	2006-07	2007-08	2009 - 10
HOPE	64%	64%	65%	*55%*
GAMS	91%	91%	90%	*91%*
ASPIRE	55%	59%	57%	*46%*
ACCESS	18%	20%	22%	*20%*
TOTAL	65%	66%	65%	*54%*

Note: FTF = First-Time Freshman

The differences in the scholarship renewal rates among Dual Enrollment Grant and traditional students that qualify for ASPIRE raise interesting questions, such as: What are the characteristics of low-Income Dual Enrollment Grant students that are associated with their retention of the scholarship at a higher rate than TELS low-income students? Is there a positive relationship between exposure to college classes while in high school for low-income students and scholarship renewal? And, are there institutional best practices that are contributing to this success?

Section Summary

The Dual Enrollment Grant program's enrollment has almost tripled since its inception in 2005 (see Table 1). The high school academic characteristics of the Grant recipients show that the recipients are high achieving and well prepared for their postsecondary experience. Furthermore, recipients that enroll in a postsecondary institution following graduation from high school progress towards, and graduate with, their degree at high rates. However, participation in the program appears to be largely related to the students' proximity to a postsecondary institution. Recent legislation passed by the Tennessee General Assembly in

2010 (SB2008) will allow recipients to take more classes while they are participating in the program, potentially shortening their time-to-degree.

HOPE FOSTER CARE GRANT

Implemented in 2005, the HOPE Foster Care Grant is funded by net proceeds from the Tennessee Education Lottery Corporation. The grant program provides financial assistance for students that have ever been foster children of the State. A foster child is defined by the State as a child who was in the custody of the Tennessee Department of Children's Services (DCS) for at least one year:

- after turning 14 years old; or
- after turning 14 years old and placed for adoption by DCS or one of its adoption contract agencies and the adoption was finalized; or
- after turning 14 years old was placed in permanent guardianship by DCS.

At eligible public postsecondary institutions, the grant program pays all tuition and mandatory fees less any gift aid.[18] At an eligible independent institution, the grant is limited to the statewide average tuition and mandatory fees for a public four-year or two-year institution. Students may continue to receive that grant for a period of six years from admittance to an eligible postsecondary institution if satisfactory progress is made in a course of study in accordance with the standards and practices used for Title IV programs by the postsecondary institution in which the student is currently enrolled.

Eligibility Requirements

To be eligible[19] to participate in the HOPE Foster Care Grant program, a student must meet all the following eligibility criteria:

- Tennessee resident;
- Earned a high school diploma or equivalent;
- Enroll in an eligible postsecondary institution and apply for the grant no more than four (4) years after the graduation from high school or equivalent;
- Present the Tennessee Student Assistance Corporation (TSAC) with official certification from the DCS that the student meets the eligibility requirement for the grant; and
- Meet the minimum HOPE and HOPE Access grant eligibility requirements.[20]

[18] Gift aid is defined as scholarship and grants from any source that do not require repayment.
[19] Full eligibility requirements can be found on TSAC's College Pays website: www.tn.gov/collegepays

Program History

Table 13 presents the number of students served and the total dollars awarded since the program's inception. Since its inception in 2005, the HOPE Foster Care Grant program has served 123 students[21] at a total cost of $618,737. The number of first-time students participating in the program has fluctuated, with the program's first year having the highest participation until 2010, the most recent academic year of available data. On average, the program enrolls 21 new students a year.

Table 13: HOPE Foster Care Grant Recipients and Dollars Awarded
2005-06 to 2010-2011

Academic Year	Students Served°	Distinct Count of Students Served*	Average Award per Student †	Total Dollars Awarded†
2005-06	29	29	$2,985	$86,558
2006-07	17	12	$2,036	$34,604
2007-08	14	10	$2,288	$32,035
2008-09	21	15	$4,171	$87,596
2009-10	30	18	$4,212	$126,360
2010-11	51	39	$4,933	$251,584
Total	162	123	$3,819	$618,737

Source: Tennessee Student Assistance Corporation (TSAC)
° Students counts are unduplicated within each year, but there are duplications across years
* Unduplicated count within and across years
† Calculated using Total Students Served

Background Characteristics

Table 14 presents the demographic characteristics of recipients of the HOPE Foster Grant compared to TELS recipients and students enrolled at a Tennessee public institution. The table shows that recipients of the HOPE Foster Grant program are more than twice as likely to be female than male. Recipients are also almost twice as likely as TELS students to identify as an ethnic minority. According to **Table B-1** in *Appendix B*, 43 percent of all recipients are Caucasian females.

However, it is not clear how the gender and racial distributions of the grant recipients compare to the gender and racial distributions of all eligible foster children in Tennessee. If certain students in the program are overrepresented by gender or race compared to all eligible foster students, then numerous questions are raised. For example, why are Caucasian female

[20] The eligibility requirements can be found on TSAC's College Pays website: www.tn.gov/collegepays
[21] This is an unduplicated count of students within and across years.

students more likely to take part in the program than other groups? Are there successful interventions or best practices that can be identified and learned from? Or, what are the factors related to underrepresented students' decisions not to accept these educational benefits?

Table 14:
Demographics of 2005 - 2010 Foster Grant recipients compared to FTF TELS recipients* since inception

		Foster Grant Students - Since Inception	TELS Students* - Since Inception
Gender	Female	71%	60%
	Male	29%	40%
Race	African American	30%	10%
	Caucasian	63%	85%
	Other	7%	5%
Pell Eligible°	Yes	100%	34%
	No	0%	66%

Notes:
* TELS recipients include: HOPE, GAMS, ASPIRE, and ACCESS
° Excludes students that did not fill out a FAFSA
FTF = first-time freshman

Academic Preparation

The social, cultural, economic, and educational challenges that foster children face should not be understated. Additionally, many of the challenges these students face are due to circumstances outside of their control. Given these realities, the high school academic performance of Grant recipients is impressive (see **Table 15**).

On average, recipients' composite ACT score was above the state average (19.5), and their average high school GPA was above a 3.0 (ACT, 2011). Despite the positive academic performance of these students, there are obvious differences between the level of preparation between Foster Grant recipients and TELS recipients. For example, Foster Grant recipients are more likely to need remediation/learning support and are less likely to meet both TELS eligibility criteria, a strong predictor of postsecondary success (THEC, 2011a).

Table 15: Academic preparation of Foster Care Grant students vs. TELS students since both programs' inception

	Foster Care Grant Recipients	TELS* Recipients
Average High School GPA	3.25	3.42
Average Composite ACT Score	21	23
% Meeting at least ***one*** TELS Qualification	87%	100%
% Meeting ***both*** TELS Qualifications	29%	60%
Of students that would/did Qualify For TELS, % Qualifying for HOPE	87%	92%
Of students that would/did Qualified For TELS, % Qualify for GAMS	0%	8%
% Taking at least one Remedial or Developmental Learning Support Course	32%	19%

* TELS recipients include: HOPE, GAMS, ASPIRE, and ACCESS
Notes: 1) Table represents unduplicated headcounts
2)Table excludes students with missing ACT or High School GPA data.

Postsecondary Participation

As shown in **Table 16**, Foster Care Grant recipients are primarily concentrated in public four-year institutions. When comparing the percentage of recipients enrolling at TBR and UT universities, the distribution is almost equal when accounting for the number of institutions in each system. Foster Care Grant recipients' propensity to enroll in public four-year institutions may be driven by the award amount of the grant. The grant amount covers the full tuition and mandatory fees at a public four-year institution. However, at a private institution the grant amount is limited to the average of the state's public four- or two-year institutions, leaving the student with the responsibility of funding the balance.

Table 16:
Distribution of Foster Care Grant recipients by system in their first postsecondary semester, from 2005-06 to 2010-11

System	Foster Grant recipients	TELS recipients
TBR Universities	43%	38%
TBR Community Colleges	29%	16%
UT Institutions	20%	28%
TICUA Institutions	8%	18%
Total	100%	100%

Postsecondary Progression & Success

Table 17 shows that Foster Care Grant recipients are attempting fewer credit hours in their first semester than TELS first-time freshmen and first-time freshmen at Tennessee public institutions in 2010. Despite taking fewer hours, on average Foster Care Grant recipients are enrolled full-time[22], and are attempting enough hours to earn their degrees in less than 150 percent of normal time.[23]

Table 17:
Average credit hours attempted by Foster Care Grant recipients in their first semester, by System

	Foster Grant Average credit hours attempted	2010 TELS FTF average credit hours attempted	2010 TN Public FTF average credit hours attempted
TBR Universities	12.7	14.4	13.8
TBR Community Colleges	10.4	12.4	11.0
UT System	13.3	14.6	14.2
TICUA Institutions	15.3	15.3	15.2
Average Across Systems	12.4	14.4	12.8

[22] Full-time is defined as 12 credit hours
[23] 150% of time is three years for an associate's degree and six years for a bachelor's degree assuming 15 hours per semester.

Table 18 presents the percent of Foster Care Grant recipients that accumulated 24, 48, 72, and 96 credit hours. On average, less than half of Foster Care Grant recipients accumulate 48 credit hours, which the equivalent of finishing two years of college taking 12 hours a semester. Less than a third of grant recipients finished the equivalent of four years of college. The low number of grant recipients reaching these progression marks highlights the need for additional student support services for Grant recipients.

Table 18:
By cohort year and by system, the percent of Foster Care Grant recipients that completed at least 24, 48, 72, 96 credit hours

Accumulated at Least 24 hours					
	2005	*2006*	*2007*	*2008*	*2009*
TBR Universities	71%	80%	100%	50%	75%
TBR Community Colleges	75%	0%	*	100%	17%
UT System	100%	0%	50%	50%	50%
TICUA Institutions	*	100%	25%	0%	*
Total	76%	42%	56%	57%	50%

Accumulated at Least 48 hours					
	2005	*2006*	*2007*	*2008*	*2009*
TBR Universities	57%	80%	67%	33%	NA
TBR Community Colleges	50%	0%	*	75%	NA
UT System	100%	0%	50%	50%	NA
TICUA Institutions	*	100%	0%	0%	NA
Total	59%	42%	33%	43%	NA

Accumulated at Least 72 hours					
	2005	*2006*	*2007*	*2008*	*2009*
TBR Universities	57%	60%	67%	NA	NA
TBR Community Colleges	25%	0%	*	NA	NA
UT System	67%	0%	50%	NA	NA
TICUA Institutions	*	100%	0%	NA	NA
Total	45%	33%	33%	NA	NA

Accumulated at Least 96 hours					
	2005	*2006*	*2007*	*2008*	*2009*
TBR Universities	50%	60%	NA	NA	NA
TBR Community Colleges	25%	0%	NA	NA	NA
UT System	33%	0%	NA	NA	NA
TICUA Institutions	*	100%	NA	NA	NA
Total	38%	33%	NA	NA	NA

Notes: The percentages represent small *N*'s
NA = Not Applicable. This denotes that these cohorts have not had sufficient time to accumulate the stated number of hours (assuming 12 hours a semester from the first semester of enrollment)
* means no students were originally part of the cohort at this system

Table 19 shows the 6-year graduation rate for the 2005 Foster Care Grant recipient cohort. Of the 29 students that participated in the program, only 10 (34 percent) graduated with an associate's or bachelor's degree within six years. In comparison, the six-year graduation rate of TELS 2005 first-time freshmen was 52 percent[24] , and the six-year graduation rate for Tennessee first-time freshmen enrolled at public institutions for the same cohort year was 47 percent.[25]

Examined together, Tables 17, 18, and 19 provide a picture of Foster Care Grant recipients' academic behavior in college. Recipients of the Grant begin their college experience taking fewer classes than their peers, and do not progress at the same rate; as a result, fewer graduate within six years. Further research is needed to identify factors that are predictive of Foster Grant students' dropout and success. For example, do Foster Care Grant recipients that attempt more hours in their first semester progress at a higher rate than students that take fewer hours? Or, are the attrition patterns different across ethnic and gender groups? If so, how can this information inform institutional support services?

Table 19:
2005-06 Hope Foster Care Grant recipients that graduated within 6-years with an Associate's or Bachelor's degree

Beginning Cohort	Number of Graduates	6-year Graduation Rate
29	10	34%

Section Summary

Since the program's inception, the Hope Foster Care Grant has served 123 foster children, an average of 21 new students a year. Recipients of the Grant are academically less prepared than their TELS counterparts; however, their average composite ACT score (21) was above the state average (19.5). Recipients are also more likely to need remedial and developmental/learning support, take fewer credit hours, and drop out at higher rates. Given the challenges these students have faced personally and academically, additional support services would likely be needed to increase their postsecondary success.

[24] Source: THEC SIS
[25] Source: THEiC SIS; Complete College TN: http://thec.ppr.tn.gov/THECSIS/CompleteCollegeTN/Default.aspx

HELPING HEROES GRANT

The Helping Heroes Grant, funded by net proceeds from the Tennessee Education Lottery Corporation, provides financial assistance for eligible veteran students[26] in Tennessee. Implemented in 2008 and funded on a first-come, first-served basis, the program provides $1,000 per semester for recipients that successfully complete 12 or more credit hours and $500 per semester for recipients that successfully complete 6 to 11 credit hours in a semester at an eligible postsecondary institution. Students that complete less than 6 hours in a semester are not eligible for the grant. The grant is awarded retroactively as students pass their courses.[27]

Recipients may receive the award until one of the following events occurs:

- Recipient earns a bachelor's degree;
- Recipient receives the grant for eight full semesters, defined as 12 hours or more. Completion of 6-11 hours constitutes ½ a semester; or
- Recipient has reached the eighth anniversary of the veteran's honorable discharge from military service.

Eligibility Requirements

Unlike the other TELS scholarship programs, Helping Heroes grants are awarded on a first-come, first-served basis. To be eligible[28] for a Helping Heroes grant, a student must:

- Be a Tennessee resident
- Be a honorably discharged veteran, or a former or current member of a reserve or Tennessee National Guard unit that was called into active military service
- Be awarded the following: Iraq Campaign Medal; Afghanistan Campaign Medal; or Global War on Terrorism Expeditionary Medal, on or after September 11, 2001
- Enroll at an eligible institution
- Have not earned a bachelor's degree
- Not be in default on a federal Title IV educational loan
- Not owe a refund on a federal Title IV or Tennessee student financial aid program
- Be in compliance with federal drug-free rules and laws for receiving financial assistance
- Not be incarcerated
- Not be required to meet any academic standard at the time of enrollment

[26] See the *Eligibility Requirements* section for the definition of a qualifying "veteran"
[27] Students must receive a non-failing grade as their final course grade in order to receive the award
[28] Full eligibility requirements can be found on TSAC's College Pays website: www.tn.gov/collegepays

Program History

Table 20 presents the number of students served and the total dollars awarded since the program's inception. Since 2008, 815 students[29] have participated in the program. While the number of eligible veterans in the State is unknown, the number of military and National Guard personnel present in Tennessee suggests that many eligible veterans are not taking advantage of the grant program.

Table 20: Helping Heroes Grant Recipients and Dollars Awarded
2008-09 to 2010-2011

Academic Year	Total Students Served°	Unduplicated Student Count*	Average Award per Student†	Total Dollars Awarded†
2008-09	260	267	$1,406	$365,614
2009-10	367	234	$1,398	$513,242
2010-11	503	314	$1,352	$680,000
Total	1130	815	$1,380	$1,558,856

Source: Tennessee Student Assistance Corporation (TSAC)
° Student counts include duplications
* Unduplicated count across years
† Calculated using Total Students Served

One of the reasons for the lack of participation may the robust financial aid package provided in the Post 9/11 GI Bill, which allows veterans to attain a fully subsidized education. The Post 9/11 GI Bill covers the cost of tuition and fees (capped at the most expensive public undergraduate tuition in the state), a monthly housing stipend, and $1,000 for books and supplies per year (US VA, 2008). Students that met the eligibility criteria for the Grant program and Post 9/11 GI Bill are in the rare position of having their financial need fully met.

Veterans participating in the Grant program offer researchers the opportunity to compare the effects of a holistic education benefits package on student success. Specifically, future research could compare students receiving both the comprehensive GI Bill and the Helping Heroes Grant with students that only receive the Helping Heroes Grant to determine the impact of full financial aid on veteran students' postsecondary success.

Background Characteristics

Table 21 presents the background characteristics of Helping Heroes Grant recipients compared to all TELS recipients from 2008 to 2010. The table shows that while the gender distribution of

[29] This is an unduplicated count of students within and across years.

Table 21:

2008 - 2010 Helping Heroes Grant recipients' demographics compared to TELS recipients*

			2008	2009	2010
Gender	Helping Heroes Recipients	Female	19%	14%	12%
		Male	81%	86%	88%
	TELS Recipients*	Female	59%	59%	59%
		Male	41%	41%	41%
Race	Helping Heroes Recipients	African American	13%	12%	10%
		Caucasian	76%	78%	80%
		Other	11%	11%	10%
	TELS Recipients*	African American	9%	10%	10%
		Caucasian	86%	85%	84%
		Other	4%	5%	5%
% with at least one parent with an Associate's degree or higher	Helping Heroes Recipients		94%	92%	91%
	TELS Recipients*		64%	63%	64%
Adjusted Gross Income	Helping Heroes Recipients	$12000 or less	29%	25%	26%
		12,001-24,000	35%	20%	27%
		24,001-36,000	18%	23%	13%
		36,001-48,000	7%	10%	12%
		48,001-60,000	7%	8%	5%
		60,001-72,000	3%	3%	5%
		72,001-84,000	1%	4%	4%
		84,001-96,000	0%	1%	3%
		over $96,000	1%	4%	5%
	TELS Recipients*	$12000 or less	6%	7%	8%
		12,001-24,000	8%	8%	10%
		24,001-36,000	9%	9%	10%
		36,001-48,000	8%	8%	9%
		48,001-60,000	9%	8%	9%
		60,001-72,000	9%	9%	9%
		72,001-84,000	9%	9%	8%
		84,001-96,000	8%	8%	8%
		over $96,000	33%	34%	31%

Notes: excludes students with missing data by category

* TELS recipients include: HOPE, GAMS, ASPIRE, and ACCESS

the armed services is becoming more equitable, participants in the grant program are predominantly male. Additionally, recipients are more likely to identify as an ethnic minority and be low-income than their TELS counterparts. However, 91 percent of recipients have at least one parent with an Associate's degree or higher compared to 64 percent for TELS recipients in the most recent year.

The high number of low-income students participating in the program compared to the TELS population probably can be attributed to two factors: 1) Grant recipients are independent students and their adjusted gross income is a reflection of their earnings, while TELS recipients' AGI is primarily a reflection of their parents' earnings. 2) One of the requirements of the grant is that recipients cannot have previously obtained a bachelor's degree, meaning recipients were noncommissioned officers and earned less than commissioned officers, whose requires a college degree.

The high percentage of grant recipients with at least one parent with an Associate's degree or higher provides further anecdotal evidence that the grant program is potentially underutilized. Traditionally, students that join the military without a college degree are more likely to be first-generation college students and from households with lower educational attainment (Watkins & Sherk, 2008). The fact that almost all of the veterans participating in this program come from households that completed a postsecondary degree suggests that there may be a larger population of veterans within the State that would be classified as first-generation college students that are not taking advantage of the program.

Academic Preparation

Table 22 presents measures of academic preparedness of Helping Heroes Grant recipients compared to TELS recipients since the inception of both programs. The table shows that Grant recipients are less prepared for the postsecondary experience than their TELS counterparts. Specifically, recipients are almost twice as likely to need remediation/learning support, and are less likely to meet the minimum qualifications for the HOPE scholarship program.

Recipients' average ACT score is slightly above the State average of 19.5, while their average GPA is below (3.15) for public high school graduates over the same period, 2008-10.[30] While these findings may seem at odds with the high percentage of recipients with at least one parent with an associate's degree, these academic preparation indicators may be a better indicator of these students' interest and focus while in high school, rather than their scholastic aptitude.

[30] Source: THEC SIS

Table 22: Academic preparation of Helping Heroes Grant recipients compared to TELS recipients since both programs' inception

	Helping Heroes Recipients (2008)	TELS* Recipients (2004)
Average High School GPA	2.81	3.42
Average Composite ACT Score	20	23
% Meeting at least ***one*** TELS Qualify	20%	100%
% Meeting ***both*** TELS Qualify	9%	60%
Of students that would/did Qualified for TELS, % Qualifying for HOPE	20%	92%
Of students that would/did Qualified for TELS, % Qualifying for GAMS	0%	8%
% Taking at least one Remedial & Developmental Course	34%	19%

* TELS recipients include: HOPE, GAMS, ASPIRE, and ACCESS
Notes: 1) Table represents unduplicated headcounts
2)Table excludes students with missing ACT or High School GPA data.

Postsecondary Participation

Table 23 presents the distribution of Helping Heroes recipients compared to TELS recipients, by system, in their first semester from 2008-2010. While TELS recipients are more evenly distributed across Tennessee's higher education systems, grant recipients are overwhelmingly concentrated at TBR universities and community colleges. However, grant recipients' affinity for enrolling at TBR universities and community colleges may be explained by their high school academic performance and their limited financial resources.

Table 23:
Distribution of Helping Heroes Grant recipients by system in their first semester from 2008-2010

System	Helping Heroes %	TELS recipients %
TBR Universities	48%	38%
TBR Community Colleges	45%	16%
UT Institutions	7%	28%
TICUA Institutions	<1%	18%
Total	100.0%	100%

Postsecondary Progression & Success

Table 24 shows the average credit house attempted by Helping Heroes Grant recipients in their first semester in college by system. On average, grant recipients took fewer credit hours in their first semester than TELS first-time freshmen and first-time freshmen at Tennessee public institutions did in 2010. Despite taking fewer hours than their peers, recipients' average credit hours in their first semester started them on a trajectory to finish their degree within 150 percent of normal time.

Table 24:
Average credit hours attempted by Helping Heroes Grant recipients in their first semester by System

	Helping Heroes' average credit hours attempted	2010 TELS FTF average credit hours attempted	2010 TN Public FTF average credit hours attempted
TBR Universities	11.8	14.4	13.8
TBR Community Colleges	10.9	12.4	11.0
UT Institutions	13.2	14.6	14.2
TICUA Institutions	16.0	15.3	15.2
Average Across Systems	12.2	14.4	12.8

Helping Heroes Grant recipients are below average in preparation, and in the average number of credit hours they take in their first semester. Even so, **Table 25** shows that the first two Helping Heroes cohorts are progressing at high rates. Additionally, their progression rates are relatively stable across postsecondary systems. Given that a high percentage of these students typically would be classified as an at-risk population (being low-income, or unprepared academically), their high success rates in college warrant further explanation.

For example, does having worked full-time prior to enrolling in college better prepare students to succeed in college? Or, are skills and behaviors developed during military training, such as discipline, organization, and preparation, primary contributors to their success? Simply, are there learned behaviors that are allowing recipients to progress at higher rates than other at-risk populations, and are these skills or behaviors transferrable?

Table 25:
Percentage of Helping Heroes Grant recipients that completed at least 24, 48, 72, 96 hours, by system and cohort year

Accumulated at Least 24 hours		
	2008	*2009*
TBR Universities	100%	96%
TBR Community Colleges	93%	86%
UT Institutions	100%	94%
TICUA Institutions	NA	NA
Total	97%	91%

Accumulated at Least 48 hours		
	2008	*2009*
TBR Universities	99%	NA
TBR Community Colleges	83%	NA
UT Institutions	93%	NA
TICUA Institutions	NA	NA
Total	93%	NA

Notes: NA = Not Applicable. For the 2009 cohort, this denotes that the cohort has not had sufficient time to accumulate 48 hours (assuming 12 hours a semester from the first semester of enrollment)

Section Summary

The Helping Heroes Grant program has provided $1.5 million in grants to 815 Tennessee veterans since 2008. The majority of Grant recipients come from households where at least one parent has an associate's degree or higher. Recipients are less academically prepared than their TELS counterparts, and are more likely to need remedial and developmental/learning support, which research suggests decreases their odds of persistence and degree completion. Despite their remediation needs, Grant recipients are persisting at high rates. Part of this success may be attributable to "military friendly" institutions'[31] focus on serving veteran students. These institutions' best practices should be examined to see if they are transferrable to at-risk students in other TELS programs.

[31] As designated by the fifth annual guide of Military Advanced Education's Guide to Military-Friendly Colleges and Universities. The report can be found here: www.kmimediagroup.com/files/4th%20Annual%20Guide%20to%20Top%20Military-Friendly%20Colleges%20&%20Universities%202010-2011.pdf

MATH & SCIENCE TEACHER LOAN FORGIVENESS PROGRAM

Funded by net proceeds from the Tennessee Education Lottery Corporation, the Tennessee Math & Science Teacher Loan Forgiveness Program provides financial assistance to Tennessee public school teachers seeking an advanced degree in a math or science, or a certification to teach math or a science. A qualifying Tennessee public school teacher can receive $2,000 per academic year, and a maximum of $10,000 for all years required for the teacher's program of study.

Program participants are eligible for forgiveness of one academic year's loans for every two years that the teacher is employed teaching math or science in a Tennessee public school system. Additionally, a borrower who completes the program of study for which a Math & Science Teacher Loan was provided and who subsequently satisfies the terms of the loan in full, either through repayment or cancellation, is not prevented from participating in the Tennessee Math & Science Teacher Loan Forgiveness Program again, in order to gain certification or an advanced degree in a different area of math or science.

Eligibility Requirements

In order to be eligible[32] for a Math & Science Teacher Loan, a student must:

- Be a citizen of the United States and a resident of Tennessee;
- Attend an eligible postsecondary institution seeking an advanced degree in math or science or certification to teach math or a science; and
- Agree to teach math or a science in a Tennessee public school system two (2) academic years for each year funded; and
- Sign a promissory note that stipulates the cash repayment obligation incurred if the teaching service is not fulfilled; and
- Maintain satisfactory academic progress in the teacher's program of study with no minimum number of hours required per semester; and
- Complete the program of study within five (5) years beginning with the first term for which the loan was awarded; and
- Not allow a break in enrollment at an eligible postsecondary institution of more than twelve (12) months.

[32] Full eligibility requirements can be found on TSAC's College Pays website: www.tn.gov/collegepays

Program History

Table 26 presents the number of students served and the total dollars awarded since the program's inception. Since its inception, the Math & Science Loan program has served 65 students[33] at a total cost of $199,000. The number of first-time students participating in the program has declined every year since the program began in 2007. In the most recent year, nine first-time recipients participated in the program.

Table 26: Math & Science Loan Recipients and Dollars Awarded
2007-08 to 2010-2011

Academic Year	Students Served°	Distinct Count of Students Served*	Average Award per Student †	Total Dollars Awarded
2007-08	31	30	$2,000	$62,000
2008-09	29	16	$1,862	$54,000
2009-10	25	10	$1,880	$47,000
2010-11	18	9	$2,000	$36,000
Total	103	65	$1,932	$199,000

Source: Tennessee Student Assistance Corporation (TSAC)
° Students counts includes duplicates
* Unduplicated count within and across years
† Calculated using Total Students Served

Given the importance of Science, Technology, Engineering, and Math (STEM) jobs to the economic and workforce development priorities of the State (THEC, 2011b), the declining number of participants in the loan forgiveness program is not encouraging. Future research is needed to examine why participation is declining; however, in 2010 the amount of loans provided by the program to eligible students covered less than one third of the average tuition and fees for in-state graduate students at Tennessee public universities.[34] In order to attract more qualified participants, the loan awards could be expanded to cover the full cost of tuition and mandatory fees at a Tennessee public university.

Assuming an annual cost of $7,498 a year per student, the total cost of the program in academic year 2007-08, the year of the programs largest enrollment, would have been $232,438. If the program tripled the number of participants since its inception, the total cost would have been $2,316,882, an amount that is less than one percent of the total funding for all TELS programs in 2010.

[33] This is an unduplicated count of students within and across years.
[34] Source: Integrated Postsecondary Education Database (IPEDS) 2010 Institutional Characteristics Survey. The in-state average tuition and mandatory fees for graduate students at Tennessee public universities in 2010 was $7,498.

Background Characteristics

Table 27 presents the demographics of recipients of the Math & Science Teacher Loan Forgiveness program since its inception. The data suggest that a majority of the recipients are mid-career teachers seeking to improve their credentials, expertise, and teaching skills. Two-thirds of recipients are females, who are traditionally underrepresented in STEM fields, but overrepresented in the teaching profession. The table also shows that over 15 percent of recipients have an adjusted gross income (AGI) over $96,000. Given that 80 percent of recipients are over the age of thirty, the recipients in this category probably account for teachers that are married and filed their tax return jointly.

Table 27:
2007 - 2010 Math & Science Teacher Loan recipients' demographics

		2007	2008	2009	2010	Total
Gender	Female	59%	63%	70%	56%	61%
	Male	41%	38%	30%	44%	39%
Race	African American	0%	6%	30%	22%	9%
	Caucasian	97%	94%	70%	78%	89%
	Other	3%	0%	0%	0%	2%
Age	20-29	21%	13%	20%	33%	20%
	30-39	52%	50%	30%	33%	45%
	40-49	21%	31%	30%	33%	27%
	50+	7%	6%	20%	0%	8%
	Average Age	***37***	***38***	***38***	***35***	***37***
% with at least one parent with an Associate's degree or higher		80%	78%	75%	100%	82%
Adjusted Gross Income	$12000 or less	5%	0%	13%	0%	5%
	12,001-24,000	10%	11%	0%	0%	7%
	24,001-36,000	5%	22%	13%	14%	11%
	36,001-48,000	35%	11%	25%	14%	25%
	48,001-60,000	5%	11%	13%	14%	9%
	60,001-72,000	30%	0%	25%	14%	20%
	72,001-84,000	5%	11%	0%	14%	7%
	84,001-96,000	0%	0%	0%	0%	0%
	over $96,000	5%	33%	13%	29%	16%

Notes: Excludes students with missing data by category
AGI and Parent Education information is limited to students that filled out a FAFSA

Postsecondary Participation

Table 28 presents the distribution of Math & Science Loan recipients by system and degree level during their first semester enrolled in the program. Participants in the program are primarily pursuing a master's degree, and they are primarily concentrated at TBR universities.

Table 28:
Distribution of Math & Science Loan recipients by system and degree level in their first semester from 2008-2010

System	Percent
TBR Universities	79%
UT Institutions	21%
Degree Level	**Percent**
Masters	91%
Doctoral	9%

Postsecondary Progression & Success

Table 29 presents the average credit hours attempted by Math & Science Teaching Loan Recipients in their first semester by system. Recipients' behavior is similar across systems, with recipients on average attending part-time during their first semester enrolled in the program. Recipients' average credit hours taken suggest that recipients may be working full-time while they are participating in the program. Supporting evidence can be found in **Table 30**, which shows the average earnings of recipients in their beginning year of the program.

Table 29:
Average credit hours attempted by Math & Science Teaching Loan recipients in their first semester by system

	2007	2008	2009	2010
TBR Universities	5.5	3.0	3.0	4.5
UT Institutions	5.3	3.0	3.0	3.0
Average Across Systems	5.4	3.0	3.0	4.2

Table 30:
Average wages earned by Math & Science Teaching Loan recipients in their cohort year

	2007	2008	2009	2010	Average
Average Wages	$36,125	$42,727	$43,776	$32,863	$37,458

Source: UI Wage Data

Table 31 shows the percentage of 2007 recipients that graduated within three years[35] with their master's degree. While, on average, recipients were enrolled part-time in their first semester in the program, over 60 percent of recipients graduated within three years. Additionally, because a majority of students are enrolled part-time, the percent of 2007 recipients that graduate with their degree likely will increase as additional time passes.

Table 31:
Count and percentage of 2007 Math & Science Loan recipients that graduated within 3 years with a master's degree

Beginning Cohort*	Number of Graduates	3-year Graduation Rate
27	17	63%

* Doctoral students are excluded, because they would not have had sufficient time to complete

Section Summary

Since its inception in 2007, the Math & Science Teacher Loan Forgiveness program has served 65 students; however, enrollment of new students has declined every year. Loan recipients are typically working full-time and going to school part-time to pursue an advanced degree or certification in a math or science. Despite their part-time enrollment, over two-thirds of recipients are completing within three years, and the rate is likely to go up over time. Given the State's emphasis on teachers in STEM fields (THEC, 2011b), the declining participation in the program is disconcerting. Increasing the annual maximum loan amounts to cover the cost of tuition and mandatory fees at public universities may provide an incentive to reverse this trend.

[35] Three years is considered 150 percent of normal time for most master's degree programs.

RURAL HEALTH LOAN FORGIVENESS PROGRAM

The Rural Health Loan Forgiveness Program is a five-year pilot program funded by net proceeds from the Tennessee Education Lottery. It provides loans to future health care providers and dentists that agree to practice in a Tennessee health shortage area[36] after receiving their license to practice. The pilot program began with the 2008-09 academic year and will enroll its last cohort of students in 2012-13. The number of awards is limited to twenty-five students for the beginning and ending years of the program, and fifty students for the middle three years.

The loan amount is capped at $12,000 per academic year, or the cost of tuition, mandatory fees, books and equipment, whichever is less. In order to remain eligible to receive the award, students must maintain satisfactory progress in the program of study in which they are enrolled. Recipients are eligible for forgiveness of one year's loans for each year that they practice in a health resource shortage area after receiving their professional license.

Eligibility Requirements

To be eligible[37], a student must:

- Be a Tennessee resident
- Enroll and complete the program at an eligible institution by the end of spring 2013
- Not be in default on a federal Title IV educational loan or Tennessee educational loan;
- Not owe a refund on a federal Title IV or Tennessee student financial aid program;
- Not accept other financial aid that carries a service obligation[38]
- Sign a promissory note each year the loan is awarded stipulating the repayment obligation if service requirement is not met. All funds be repaid with interest at 9% per annum
- Be in compliance with federal drug-free rules and laws for receiving financial assistance;
- Be a full-time student pursuing a:
    - Doctor of Medicine (M.D.) degree
    - Doctor of Osteopathic Medicine (D.O.) degree
    - Doctor of Dental Surgery (D.D.S.) degree
    - Doctor of Dental Medicine (D.M.D.) degree
    - Physician Assistant credential
    - Nurse Practitioner credential

[36] For the purpose of this program, health resource shortage area means an area determined as a health resource shortage area by the Department of Health, Office of Rural Health.
[37] Full eligibility requirements can be found on TSAC's College Pays website: www.tn.gov/collegepays
[38] Exceptions include military service

Program History

Table 32 presents the number of students served and the total dollars loaned since the program's inception. Since 2008, the program has served 80 students[39] at a total cost of $1,272,767. In the program's first year, the maximum number of students enrolled (25), suggesting great interest in a loan forgiveness program that would serve Tennessee's health shortage areas. However, despite the growth in the number of total students served since 2008-09, the program's enrollment continues to decline as a percentage of its allowable capacity. For example, by 2010-11 the program's capacity was 125 students, however, there were only 80 students participating in the program.

Table 32: Rural Health Loan recipients and dollars awarded
2008-09 to 2010-2011

Academic Year	Total Students Served°	Unduplicated Student Count*	Average Award per Student†	Total Dollars Awarded†
2008-09	25	25	$10,952	$273,806
2009-10	50	32	$10,358	$517,912
2010-11	45	23	$10,690	$481,049
Total	120	80	$10,606	$1,272,767

Source: Tennessee Student Assistance Corporation (TSAC)
° Student counts include duplications across years
* Unduplicated count across years
† Calculated using Total Students Served

Background Characteristics

Table 33 shows the background characteristics of Rural Health loan recipients from 2008-2010. Of all the programs included in the study, the Rural Health Loan Forgiveness program had the highest percentage of missing data.[40] As a result, some of the categories and their percentages in the table represent small numbers, which can cause percentages to vary over time without much change occurring. Given these considerations, recipients of the program are predominately female, Caucasian, and come from well-educated families. Over the three cohorts, however, there has been increased minority participation in the program.

[39] This is an unduplicated count of students within and across years.
[40] See the *data limitations* section for the percent missing

Table 33:
2008 - 2010 Rural Health Loan recipients' demographics

		2008	2009	2010	Total
Gender	Female	83%	76%	90%	83%
	Male	17%	24%	10%	17%
Race	African American	0%	10%	20%	10%
	Caucasian	100%	90%	75%	88%
	Other	0%	0%	5%	2%
% with at least one parent with an Associate's degree or higher		83%	81%	89%	84%
Adjusted Gross Income	$12000 or less	17%	14%	0%	11%
	12,001-24,000	0%	14%	22%	12%
	24,001-36,000	28%	5%	6%	12%
	36,001-48,000	11%	0%	11%	7%
	48,001-60,000	17%	10%	6%	11%
	60,001-72,000	6%	29%	0%	12%
	72,001-84,000	6%	0%	17%	7%
	84,001-96,000	6%	14%	0%	7%
	over $96,000	11%	14%	39%	21%

Notes: Excludes students with missing data by category

Postsecondary Participation

Table 34 presents the distribution of Rural Health loan recipients by academic year and system since its inception. Overwhelmingly, recipients of the loans are enrolled in TICUA institutions. What is not known, and what future research should explore, is the kind of programs and degrees the loan recipients are pursuing.[41] For example, are these students primarily enrolled in Doctor of Medicine degree programs, or are the majority of recipients seeking to become a physician assistant? While all the programs have been identified as a priority for the state in Tennessee's health shortage areas, a distribution of recipients by degree program would allow policymakers to understand how the current pilot program is being utilized.

[41] This could not be determined due to the large number of missing cases

Table 34: Distribution of Rural Health loan recipients by system and academic year

	2008-09	2009-10	2010-11	Total
TBR Universities	4%	8%	12%	8%
UT Institutions	8%	18%	9%	13%
TICUA Institutions	88%	74%	79%	79%
Total	100%	100%	100%	100%

Source: TSAC (Represents duplicate counts across years)

Postsecondary Progression & Success

Due to the high percentage of missing data for the Rural Health program, postsecondary progression and success metrics are not provided.

Section Summary

Started in 2008, the Rural Health Loan Forgiveness Program is a five-year pilot program that provides loans to future health care providers and dentists that agree to practice in a Tennessee health shortage area after receiving their license to practice. The pilot program will enroll its last cohort of students in 2012-13. Since its inception, the program has provided financial support to 80 students at a cost of over $1.2 million. Recipients of the program are predominately female and Caucasian, although there has been growth in the number of minority students participating. Insufficient time has passed to see what percentage of the cohort has completed their advanced degree.

APPENDIX A: DATA LIMITATIONS

During the course of conducting the research for this report, several data issues were discovered, which are important to note and discuss. These data concerns range from missing data from institutions to a lack of congruence between THEC's Student Information System (SIS) and TSAC's e*GRandS database.[42] As a result of the challenges encountered in the development of this report, several recommendations are made, which the authors believe will continue to build and strengthen THEC's ability to follow student success in these smaller lottery scholarship programs. The section begins with a summary of the recommendations and then outlines specific issues encountered during the analyses.

Recommendations

Recommendation 1: Make e*GRandS *the foundation for enrollment validation for THEC's TELS student data.*

Adopting this recommendation would improve the accuracy of THEC's lottery student database and its reporting. e*GRandS is the actual payment record of the TELS programs and is extremely accurate, while THEC's current lottery student database relies on institutional reporting. While currently THEC receives snapshots from a limited number of tables in the e*GRandS database, a more managed approach to incorporating the e*GRandS database as part of THEC's SIS for lottery students should be considered. Additionally, it could reduce the reporting burden on the institutions and the systems, and prevent some data reporting errors from the systems through validation of TELS students. Examples of discrepancies between e*GRandS and THEC's SIS can be found in the *Data Issues* section below.

Recommendation 2: Collect students' Last Name, First Name, and Date of Birth from the institutions as a part of the enrollment data collection cycle.

Collecting students' first name, last name, and date of birth will allow THEC to use the National Student Clearinghouse to determine what percentage of Dual Enrollment Grant recipients is enrolling and completing postsecondary education out-of-state.[43] Specifically, doing so would allow THEC to determine the amount of lottery dollars being spent on Dual Enrollment Grant students that leave the state. Additionally, it would allow THEC to report a more accurate graduation rate of students that begin their postsecondary education at a public institution in Tennessee.

*Recommendation 3: Move student level records for all TELS programs into e*GRandS.*

[42] e*GRandS is the TSAC loan and scholarship data system that is managed by NelNet Guarantor Solutions.
[43] Enrollment verification is limited to institutions participating in the Clearinghouse

Currently, student level information for several of the smaller TELS programs are maintained in Excel files by TSAC. However, TSAC has already identified and has begun to move many of these programs over to the e*GRandS database in a phased-in approach. All programs should be moved into e*GRandS, even programs that have ended or are set to end in the near future.

Data Issues and Resolutions

There were numerous data issues that proved to be a challenge for the analysis. When considered in isolation, none of these issues by themselves may seem limiting. However, the combined effect of these data issues was significant and concerning. The data issues can be grouped into two categories: missing data and data anomalies. The defined categories are not intended to be exhaustive, rather to present examples of some of the data anomalies discovered in the process.

Missing Data

The issues here concern students that participated in TELS programs, but are completely missing from THEC's SIS when compared to TSAC records. The impact of these students can be seen in **Table 35.** The table presents the number of students participating in the Dual Enrollment Gant and Rural Health Loan Forgiveness programs by their cohort year (the first year they were in the program), the number that were in THEC's SIS, and the number and percentage missing. The table shows that over 25 percent of recipients of the Rural Health Loan Forgiveness program are missing from THEC's database. Equally concerning is the increasing percentage of students with missing data in the Dual Enrollment Grant with each new cohort. A cursory examination suggests that individuals enrolled in private institutions are more likely to be missing than their public counterparts.

To address the missing data, researchers attempted to gain this information through two sources: 1) TSAC was asked to provide last name, first name, and date of birth for the missing students when available. THEC sent a list of 83 students to the National Student Clearinghouse to obtain their enrollment information. Of these 83 students, the Clearinghouse was able to match 43 (52 percent), and the majority of matched records were enrolled in in-state private institutions. However, receiving a match does not mean that Clearinghouse showed enrollment for students during their time in the program. The match provided could have provided enrollment information for students at different institutions prior to their participation in a TELS program. 2) Missing students were matched on the public high school graduates database in THEC's SIS, which yielded an additional 480 matches. Of these 480 potential students, the Clearinghouse matched 287, the majority of which attended in-state private institutions.

Table 35: Count and percentage of students missing by TELS program

Dual Enrollment Grant				
Cohort Year	**# of Students in Program**	**# in THEC SIS**	**# of Students Missing**	**% Missing**
2005	5359	5270	89	2%
2006	7462	7335	127	2%
2007	9332	9111	221	2%
2008	11483	10470	1013	9%
2009	12302	10691	1611	13%
2010	13747	11185	2562	19%
Total	**59685**	**54062**	**5623**	**9%**
Rural Health Loan Forgiveness				
Cohort Year	**# of Students in Program**	**# in THEC SIS**	**# of Students Missing**	**% Missing**
2008	25	18	7	28%
2009	32	21	11	34%
2010	23	20	3	13%
Total	**80**	**59**	**21**	**26%**

Data Inconsistencies

While 90 percent of Dual Enrollment Grant students were represented in the database, the actual number of students correctly identified as Dual Enrollment Grant students in THEC's SIS was much lower (see **Table 36**). The table shows that only 26 percent of students were correctly identified, and the percentage is declining with each passing year. Additionally, another 1,335 Dual Enrollment Grant students' reported year of high school graduation was earlier than their participation in the program. It is important to note that inconsistencies were not limited to the Dual Enrollment Grant program rather, they were wide ranging.

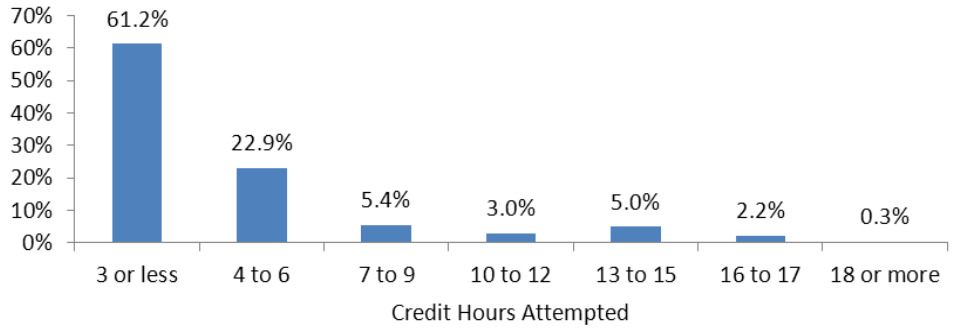
Table 36: Percent of Dual Enrollment Grant students correctly coded in THEC's SIS

Year	# Correctly Coded in THEC SIS	Total # of Students	% Coded Correctly
2005	2772	5359	52%
2006	2903	7462	39%
2007	3483	9332	37%
2008	2542	11483	22%
2009	1981	12302	16%
2010	1580	13747	11%
Total	15261	59685	26%

One of the biggest challenges researchers faced during the course of the study was to identify the first semester that students were enrolled in the program and the institution that they attended. This proved especially challenging for the Dual Enrollment Grant Program. The THEC SIS does contain a flag denoting the term and year that a student is enrolled during their first semester at an institution. However, students enrolled while participating in the Dual Enrollment Grant program should not be coded with this identifier.

Figure 3 shows the average credit hours taken as a Dual Enrollment Grant student in the semester that they were flagged as a first-time freshman. Obviously and overwhelmingly, Dual Enrollment Grant students are being flagged as a first-time freshman while they are still participating in the program in high school. These inconsistencies are problematic because, defining a student's first semester, and the institution that they attended as a college student after graduating high school is essential for most postsecondary metrics.

Figure 3:
Distribution of credit hours attempted during first semester enrolled



It is worth repeating that the problems identified are not an exhaustive list of data issues, nor were these problems exclusive to the Dual Enrollment Grant and Rural Health Loan Forgiveness programs. For example, in both TELS programs serving graduate students, students were consistently not coded as graduate students in the year that they were enrolled in the program. Additionally, it was not uncommon for students from all programs to have reported high school graduation years prior to the 1900s. Finally, not collecting first name, last name, and date of birth, prevented the researchers from gathering out-of-state and non-public enrollment information within the state that could have enhanced the study's findings.

In summary, the data limitations impacted the report in tangible ways. First, they forced the researchers to deduce a student's first semester in college. Specifically, the descriptive statistics on students' enrollment and behavior in their first semester represents the researchers' best guess given the data limitations. And second, the data challenges encountered helped the researchers to identify areas of improvement going forward, some of which were included in the *recommendations* section.

APPENDIX B: TABLES & FIGURES

Table B-1:
County share of Dual Enrollment Grant participants since 2005

County	Percent
ANDERSON	1.2%
BEDFORD	0.9%
BENTON	0.4%
BLEDSOE	0.3%
BLOUNT	2.2%
BRADLEY	2.8%
CAMPBELL	0.7%
CANNON	0.2%
CARROLL	1.4%
CARTER	0.6%
CHEATHAM	1.3%
CHESTER	0.5%
CLAIBORNE	0.4%
CLAY	0.4%
COCKE	0.4%
COFFEE	1.2%
CROCKETT	0.4%
CUMBERLAND	1.2%
DAVIDSON	3.5%
DECATUR	0.3%
DEKALB	0.5%
DICKSON	1.5%
DYER	2.1%
FAYETTE	0.2%
FENTRESS	0.7%
FRANKLIN	0.5%
GIBSON	1.3%
GILES	0.7%
GRAINGER	0.4%
GREENE	1.4%
GRUNDY	0.1%
HAMBLEN	0.6%
HAMILTON	6.7%
HANCOCK	0.1%
HARDEMAN	0.6%
HARDIN	0.2%
HAWKINS	1.0%

County	Percent
HAYWOOD	0.3%
HENDERSON	1.0%
HENRY	0.4%
HICKMAN	0.2%
HOUSTON	0.3%
HUMPHREYS	0.6%
JACKSON	0.3%
JEFFERSON	0.8%
JOHNSON	0.1%
KNOX	5.7%
LAKE	0.4%
LAUDERDALE	0.8%
LAWRENCE	1.0%
LEWIS	0.6%
LINCOLN	0.7%
LOUDON	0.9%
MACON	0.5%
MADISON	2.5%
MARION	0.5%
MARSHALL	0.5%
MAURY	1.3%
MCMINN	1.0%
MCNAIRY	0.9%
MEIGS	0.4%
MONROE	0.7%
MONTGOMERY	1.8%
MOORE	0.2%
MORGAN	0.6%
OBION	0.6%
OVERTON	0.5%
PERRY	0.2%
PICKETT	0.0%
POLK	0.3%
PUTNAM	0.6%
RHEA	0.9%
ROANE	0.8%
ROBERTSON	1.7%
RUTHERFORD	0.8%
SCOTT	1.0%
SEQUATCHIE	0.3%
SEVIER	2.4%
SHELBY	7.7%
SMITH	0.3%
STEWART	0.2%
SULLIVAN	2.4%
SUMNER	5.2%

County	Percent
TIPTON	1.5%
TROUSDALE	0.2%
UNICOI	0.3%
UNION	0.2%
VAN BUREN	0.1%
WARREN	0.6%
WASHINGTON	1.6%
WAYNE	0.7%
WEAKLEY	0.7%
WHITE	0.2%
WILLIAMSON	1.5%
WILSON	2.6%
Total	**100.0%**

Table B-2:
Tuition Charges for a three hour class, Dual Enrollment Grant students vs. traditional students by institution°

Community Colleges	**Traditional Cost**	**Dual Enrollment Grant Cost**
Chattanooga State	$440	Same
Cleveland State	$452	Same
Columbia State	$440	Same
Jackson State	$440	$414*
Motlow State	$440	Same
Nashville State	$417	Same
Northeast State	$451	Same
Pellissippi State	$471	$432*
Southwest Tennessee	$471	Same
Walters State	$450	Same
Volunteer State	$437	Same
Average	*$446*	$444
Four-year public	**Traditional Cost**	**Dual Enrollment Grant Cost**
Austin Peay	$835	Same
East TN State	$846	651
Middle TN State	$846	Same
Tennessee Tech	$888	Same
Univ. of Memphis	$1,016	$385*
UT Chattanooga	$935	Same
UT Martin	$843	732
UT Knoxville	$1,074	Same
Average	*$910*	*$852*
Four-year private	**Traditional Cost**	**Dual Enrollment Grant Cost**
Aquinas College	$1,845	$300*
Bryan College	$2,520	$420
Carson-Newman	$2,598	$636
Christian Brothers	$2,685	$375*
Freed-Hardeman	$1,359	$450
Johnson University	$1,020	Same
Lee University	$1,518	$321
Lemoyne-Owen	$1,263	$300
Lipscomb University	$2,715	$300*
Martin Methodist	$2,490	$300
Maryville College	$3,654	$300*
Milligan College	$1,200	$300
Southern Adventist	$2,220	$300*
TN Temple	$1,125	$300

Four-year private	Traditional Cost	Dual Enrollment Grant Cost
TN Wesleyan	$1,560	$600
Trevecca University	$2,316	Same
Union University	$2,590	$375
Victory University	$1,062	Same
Average	*$1,986*	*$646*

Source: TSAC
° Only institutions that responded to the survey are included
*Attending on HS campus

Table B-3
2010-2011 Dual Enrollment Grants by system and institution

Institution	Number of Students	Dollars Awarded	% of Total Students within each Sector
TTC-Athens	0	-	0%
TTC-Chattanooga	0	-	0%
TTC-Covington	24	$13,500	1%
TTC-Crossville	46	$18,000	3%
TTC-Crump	45	$20,100	3%
TTC-Dickson	10	$3,975	1%
TTC-Elizabethton	51	$12,215	3%
TTC-Harriman	14	$6,000	1%
TTC-Hartsville	199	$91,900	12%
TTC-Hohenwald	83	$31,725	5%
TTC-Jacksboro	11	$5,700	1%
TTC-Jackson	6	$2,100	0%
TTC-Knoxville	0	-	0%
TTC-Livingston	140	$57,000	9%
TTC-McKenzie	2	$900	0%
TTC-McMinnville	0	-	0%
TTC-Memphis	42	$15,000	3%
TTC-Morristown	10	$3,000	1%
TTC-Murfreesboro	3	$900	0%
TTC-Nashville	193	$46,650	12%
TTC-Newbern	99	$41,900	6%
TTC-Oneida	234	$111,300	14%
TTC-Paris	0	-	0%
TTC-Pulaski	355	$154,600	22%
TTC-Ripley	59	$18,600	4%
TTC-Shelbyville	0	-	0%
TTC-Whiteville	5	$1,200	0%
TTC Total	1631	$656,265	100%

Independent Four Year	Number of Students	Dollars Awarded	% of Total Students within each Sector
Aquinas College	32	$102,500	0%
Aquinas College Primetime	0	-	0%
Baptist Mem. Coll. Health & Science	101	$360,125	1%

Independent Four Year	Number of Students	Dollars Awarded	% of Total Students within each Sector
Belmont University	666	$2,518,375	9%
Bethel University	305	$1,151,750	4%
Bryan College	156	$566,500	2%
Bryan College Adult	0	-	0%
Carson Newman College	509	$1,872,200	7%
Christian Brothers University	311	$1,175,500	4%
Cumberland University	263	$989,500	4%
Fisk University	27	$102,000	0%
Free Will Baptist Bible College	30	$114,000	0%
Freed Hardeman University	303	$1,144,000	4%
Hiwassee College	8	$28,000	0%
Johnson University	55	$200,000	1%
King College	217	$816,000	3%
Knoxville College	0	-	0%
Lambuth University	94	$342,000	1%
Lane College	21	$ 76,000	0%
Lee University	552	$2,078,375	7%
LeMoyne-Owen College	22	$81,601	0%
Lincoln Memorial University	300	$1,136,150	4%
Lipscomb University	684	$2,565,750	9%
Martin Methodist University	174	$647,000	2%
Maryville College	361	$1,345,800	5%
Memphis College of Art	35	$127,500	0%
Milligan College	207	$775,000	3%
Rhodes College	152	$567,125	2%
South College	0	-	0%
Southern Adventist University	218	$802,500	3%
Tennessee Temple University	1	$ 4,000	0%
Tennessee Wesleyan University	324	$1,229,368	4%
Trevecca Nazarene University	212	$781,500	3%
Tusculum College	207	$758,000	3%
Union University	538	$1,983,750	7%
University of the South	125	$466,000	2%
Vanderbilt University	196	$728,840	3%
Victory College (formerly Crichton)	0	-	0%
Watkins Inst. Coll. Of Art & Des.	50	$175,625	1%
TICUA Four Year Total	7456	$27,812,334	100%

Independent Two Year			
TICUA- John A Gupton College	4	$12,000	100%
TICUA Two Year Total	4	$12,000	100%

University of Tennessee	Number of Students	Dollars Awarded	% of Total Students within each Sector
University of TN, Chattanooga	3142	$11,652,121	25%
University of TN, Health Science Center	22	$84,000	0%
University of TN, Knoxville	7785	$29,050,390	61%
University of TN, Martin	1835	$6,676,083	14%
University of TN Total	12784	$47,462,594	100%

TN Board of Regents Four Year			
Austin Peay State University	1668	$6,064,603	11%
East Tennessee State University	1836	$10,486,405	12%
ETSU School of Pharmacy	0	-	0%
Middle Tennessee State University	5647	$20,702,909	36%
Tennessee State University	390	$1,424,607	3%
Tennessee Technological University	3035	$11,109,717	19%
University of Memphis	3012	$11,050,210	19%
TN Board of Regents Four Year Total	15588	$60,838,451	100%

TN Board of Regents Two Year			
Chattanooga State CC	502	$833,625	7%
Cleveland State CC	300	$525,555	4%
Columbia State CC	662	$1,113,750	9%
Dyersburg State CC	178	$301,250	3%
Jackson State CC	424	$696,765	6%
Motlow State CC	492	$824,104	7%
Nashville State CC	254	$410,272	4%
Northeast State CC	544	$962,500	8%
Pellissippi State CC	1042	$1,735,250	15%
Roane State CC	779	$1,353,736	11%
Southwest Tennessee CC	302	$488,500	4%
Volunteer State CC	741	$1,243,660	11%
Walters State CC	784	$1,338,051	11%
TN Board of Regents Two Year Total	7004	$11,827,018	100%

Source: TSAC September 29, 2011 Board of Directors Meeting Agenda; www.tn.gov/tsac/About_Us/board_meetings_new/sept11/sept11meeting.shtml

Figure B-1: Distribution of weighted high school GPAs for Dual Enrollment Grant students, 2005-10

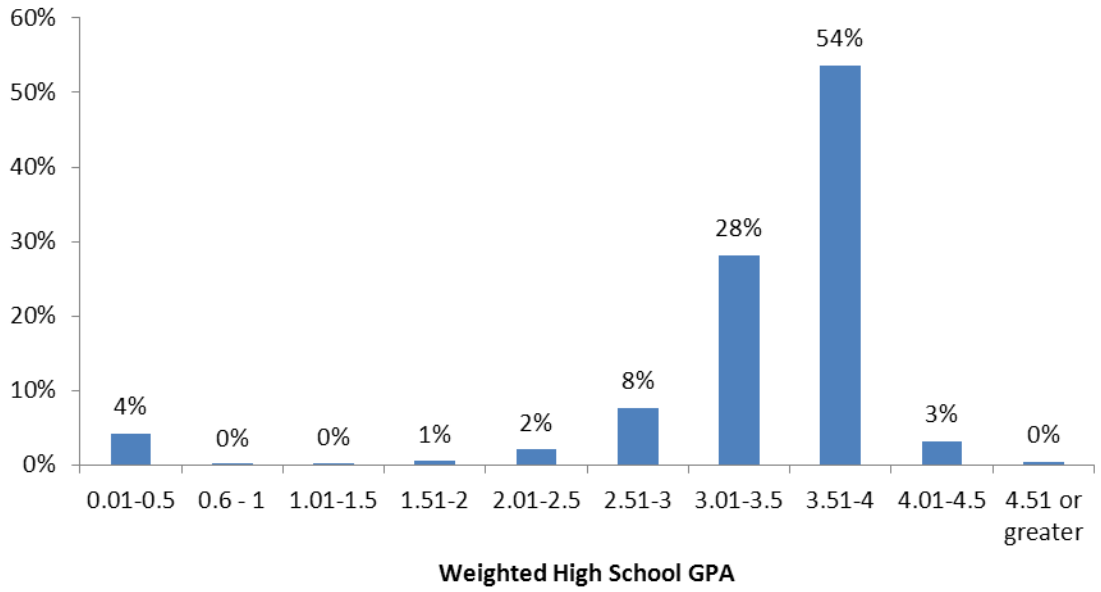
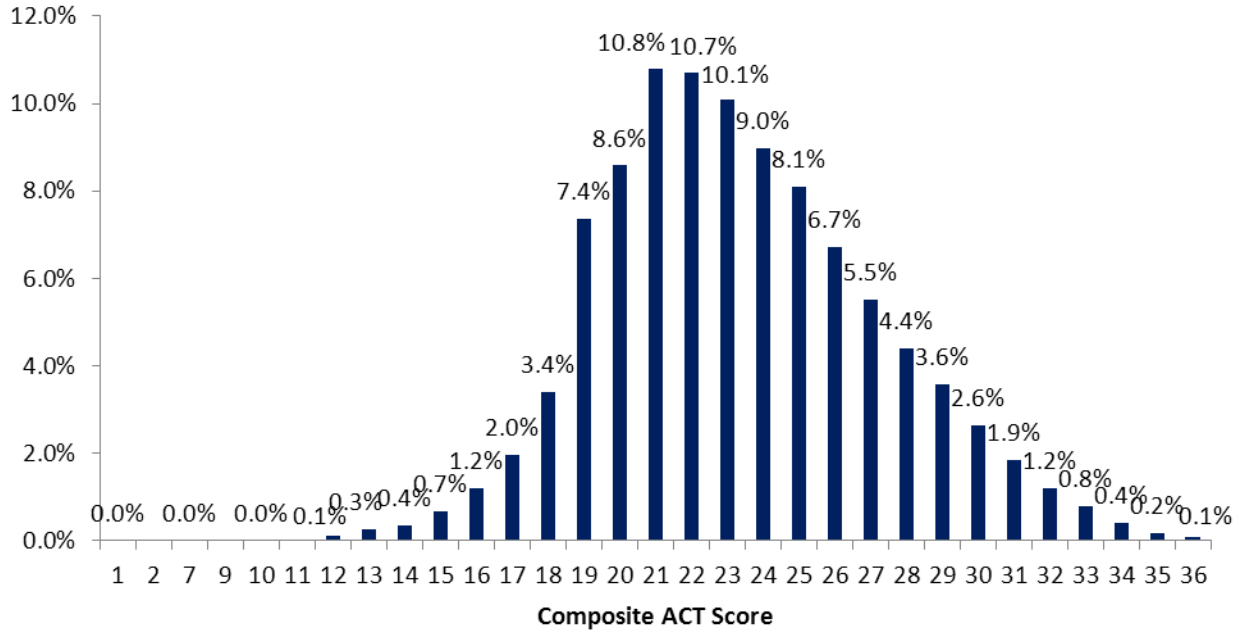


Figure B-2: Distribution of ACT composite scores for Dual Enrollment Grant students, 2005-10



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