



Comptroller of the Treasury

Quarterly Fiscal Affairs Report

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Tennessee Higher Education ☆☆☆

Tennessee has recently demonstrated a desire to improve its education system with a series of reforms. This report discusses some of these reforms, particularly the Complete College Tennessee Act and where the state is today in implementing it.

General Statistics

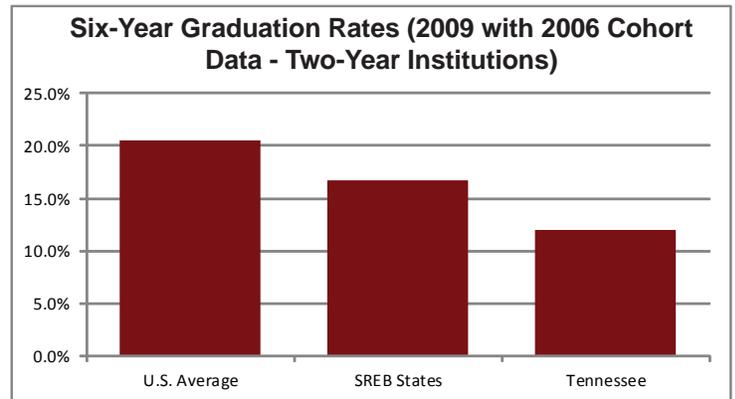
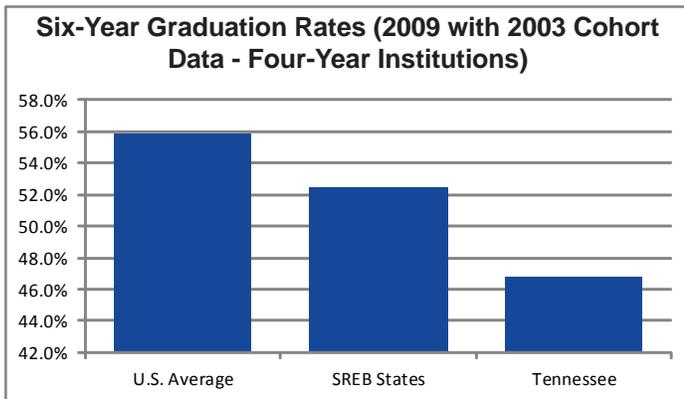
Past statistics show that Tennessee has struggled in education, though some recent improvements have been made. These improvements should be noted, but there is still much work to do. Approximately 85 percent of Tennessee students who continue on to post-secondary education stay in the state, so when looking at college graduation rates, it makes sense to start with a brief glimpse of how Tennessee prepares students for college.

- Tennessee's state-administered grades 3–8 achievement test (TCAP) scores show overall improvement for the second year in a row. The improvements appear to be the largest aggregated gain in the history of TCAP assessments. Despite these improvements, achievement levels still lag behind the rest of the nation.
- The majority of Tennessee's 11th grade students are not prepared to enter college without taking remedial coursework. For fall 2010, 47 percent of freshmen enrolled in Tennessee public institutions required remedial or developmental work.
- After years of hovering slightly below the national average ACT scores of approximately 21.0, Tennessee scores have recently decreased from approximately 20.5 in years prior to 2010 to 19.6 in 2010 and 19.5 in 2011. It should be noted that the number of students taking the test in Tennessee has increased during that time. Based on ACT scores, some of our students are not well-prepared for college.

“I often hear from business leaders that they lack job applicants with the necessary critical thinking and teamwork skills needed to succeed in the workplace.”

-Bill Frist, Former U.S. Senator, July 2012

- Since 2000, the high school graduation rate has risen over 16 percent and is now slightly higher than the national average. Despite these rising graduation rates, Tennessee's educational pipeline needs improvement. Only 19 percent of Tennessee 9th graders graduate from college within 150 percent of the normal degree time.
- For the students who do go to Tennessee's public colleges and universities, the graduation rates still continue to be below the national average.



Also, in 2010, Tennessee's student debt burden at graduation was ranked 42nd in the nation. State rankings are from 1 (highest debt) to 50 (lowest debt).

Average Debt for a Tennessee Public University Graduate, 2009-10			
University	Average Debt of Graduates	Percent of Graduates with Debt	Total Cost of Attendance
UT Knoxville	\$19,987	48%	\$20,780
UT Martin	\$19,048	59%	\$15,661
UT Chattanooga	\$13,845	52%	\$17,938
Middle Tennessee	\$14,822	5%	\$16,878
East Tennessee	\$20,984	80%	\$19,391
Memphis	\$20,856	21%	\$19,409
Tennessee Tech	\$9,510	40%	\$17,872
Austin Peay	\$19,149	55%	\$19,221
Tennessee State	-	-	\$18,204

The traditional HOPE Scholarship Program awarded nearly \$120 million in 2010 to students at Tennessee two- and four-year public institutions.

Tennessee Education Lottery Scholarship Program		
Traditional HOPE Awards By Institution, 2009-10		
System	Actual Recipients	
	Students	Dollars
UT System	12,639	\$46,951,578
Board of Regents/Four-Year	16,476	\$60,891,134
Community Colleges	7,081	\$12,095,108
Total	36,196	\$119,937,820

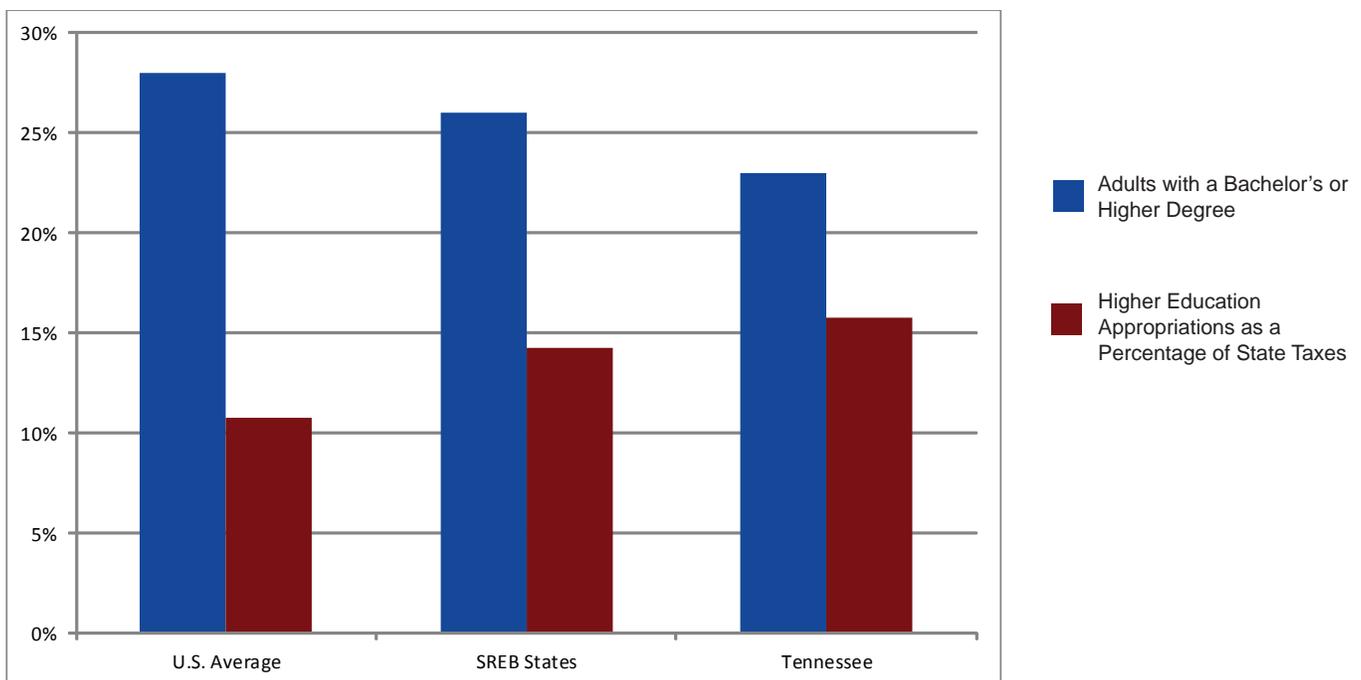
Lack of Independent Oversight and Review

While reforms have been made in attempts to improve Tennessee's educational outcomes, it is vital to ensure the integrity of academic standards in Tennessee. Independent and external quality control is needed. The constitutional officers serve on the Tennessee Higher Education Commission (THEC). The Comptroller's Office audits higher education agencies, but these audits are primarily related to financial matters or sunset provisions. To date, the only oversight of academic integrity in place is provided by the higher education community, including the Southern Association of Colleges and Schools (SACS) and peer review. The Senate has formed a higher education subcommittee to begin addressing some of these issues. While this is a step in the right direction, better quality control is required. Independent oversight is necessary to guarantee that courses are taught with acceptable rigor across all institutions, and that Tennessee's academic institutions are not cheapening the value of their degrees.

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Funding

Despite budget reductions due to the recession, in the 2010–11 fiscal year Tennessee's higher education state appropriation represented 15.8 percent of state tax dollars, ranking it eighth in the country based on this percentage comparison to other states. Higher education expenditures are consistently a larger percentage of Tennessee's state budget than most southern states, and considerably higher than the national average.



Recently, SREB provided updated information displaying that 2011-2012 state appropriations for higher education represented 13.0 percent of state tax dollars in Tennessee, ranking it 12th in the nation based on this percentage comparison to other states.

While Tennessee dedicates a higher percentage of its state taxes to higher education than most of its neighboring states, appropriations do not appear to have a proportionate relationship with graduation rates. In 2010, 28 percent of the U.S. population held at least a bachelor's degree. At the same time, only 23 percent of Tennesseans could make this claim.

Moving Forward

There is no question that improvements in Tennessee Higher Education are needed to increase competitiveness and influence economic development. According to Complete College America, there is a significant skills gap in Tennessee, and by 2020, 56 percent of the jobs in Tennessee will require a career certificate or college degree. More than ever, higher education pays off for Tennesseans in the workforce. Adults with associate's degrees earn 27 percent more than those without and adults with bachelor's degrees earn 79 percent more than those without. The fastest-growing, highest-paying jobs require education beyond high school. For years, the higher education community has talked of much needed reforms. In 2010, the legislature passed the Complete College Tennessee Act in hope of addressing some of these concerns.

Complete College Tennessee Act of 2010

The Complete College Tennessee Act of 2010 (CCTA) was passed in a January 2010 special session. The legislation sets the tone for a comprehensive reform agenda intended to transform public higher education. Several forces came together to promote passage of the CCTA. First, higher education enrollment dramatically increased while state revenues were decreasing. Additionally, K–12 education reforms passed, suggesting a need to align state higher education with overall state education policy and budget. Finally, the federal government and other groups raised awareness of the need to increase the quality of higher education and/or the number of college graduates to promote American competitiveness and future preparedness.

At the center of these reforms is the need for more Tennesseans to be better educated and trained for the workforce, while acknowledging the state’s diminished fiscal capacity to support higher education.

The CCTA includes key changes to Tennessee’s higher education structure that aim to enhance collaboration between Tennessee Board of Regents (TBR) and University of Tennessee (UT) systems. Overall, the CCTA mandated many initiatives aimed at improving higher education statewide, including:

- **Master plan:** Requires development of a master plan that outlines Tennessee’s needs in higher education and sets performance measures for success. The plan incorporates the completion agenda.
- **Institutional mission differentiation profiles:** Requires THEC to approve mission statements developed by each TBR and UT institution. These profiles outline “mission distinctions in academic degree program specialties, degree levels, and undergraduate/graduate programs.” The profiles identify the distinct mission of each institution relative to supporting the needs outlined in the state’s master plan.
- **Outcomes-based formula:** Develops a funding formula based on success and outcomes for each institution rather than enrollment-based (e.g., degree completion, graduation rates, sub-population outcomes).
- **Articulation agreement:** Aligns general courses and programs in two- and four-year institutions to develop statewide consistency for the associates’ degree system.
- **Dual-admissions and dual-enrollment:** Requires THEC to develop dual-admission and dual-enrollment policies for public institutions.

According to the Master Plan, for 2015, successful implementation of the CCTA would mean, among other things:

- Increased graduation rates and reduced time to graduate,
- Gaps in employment demand would be filled,
- Institutions funded based on outcomes instead of enrollment,
- Enhanced program and service quality,
- Reduced average cost per degree, and
- Revitalized community colleges.

2011 - Six-Year Graduation Rates, by Institution	
University	Percent
UT Knoxville	61.3%
UT Martin	46.1%
Tennessee Tech	45.0%
Middle Tennessee	44.4%
East Tennessee	43.3%
Memphis	38.2%
UT Chattanooga	37.7%
Austin Peay	34.4%
Tennessee State	34.2%

The overarching goal is to have Tennessee meet the projected national average in education attainment by 2025. This means an additional 26,000 undergraduate degrees by 2015 and an additional 210,000 degrees by 2025. The funding formula was developed to encourage this goal and is described later in the document.

The Office of the Comptroller of the Treasury recently released a performance audit report on the current progress of the implementation that pointed out a number of shortfalls with progress thus far.

Performance Audit Results

Mission Profiles

Revised mission profiles are key to improving state efficiency because they define each institution's specializations. This process is critical to avoid creating unnecessarily redundant academic programs.

The audit notes that questions remain about the quality of the mission profiles and their role in the new program approval. While THEC ultimately approved all of the new mission profiles and the process used to develop the mission profiles, not all local institutional leaders found the process and/or its outcome meaningful. Auditors interviewed presidents, chancellors, or their designees from eight randomly selected public higher education institutions across the state, including institutions governed by both the UT Board and TBR, as well as community college institutions awarding bachelor's degrees. Six of the eight reported that their institution's mission profile had not changed dramatically, if at all.

Six of the eight higher education institutional leaders interviewed reported that their institution's mission profile had not changed dramatically, if at all.

Which Mission Profile is Middle Tennessee State and which is Austin Peay State University?

Institutional Mission

X State University is a moderately selective institution and is the fastest-growing university among the Tennessee Board of Regents institutions. With a Carnegie Classification of a Master's Medium institution, X also has the fastest-growing graduate-student population in the state... X emphasizes disciplines in the arts, but also emphasizes professional disciplines in business, education, health sciences, and STEM fields. It predominantly serves undergraduate students throughout Middle Tennessee and provides additional programming and services focusing on adult, first-generation, low socio-economic, military, minority, and high-performing students.

Institutional Mission

Y State University is a moderately selective, comprehensive institution... Y attracts a diverse, largely full-time undergraduate student population with a broad range of academic preparedness... Undergraduates are prepared for professional practice in education, business, mass communication, and nursing... Y has selected graduate offerings that primarily target education, business and the applied and behavioral sciences with research focused primarily in the sciences, aviation, public history, and STEM. Y's Carnegie Classification is Master's Large and it holds the elective Community Engagement classification with its outreach and partnership activities centered on meeting the needs of the Middle Tennessee region...

Transfer Pathways

Curriculum for the general education pathway has been created, but major-related pathways were not created for all majors offered in the state as required by the CCTA. These "pathways" are agreed-upon blocks of major-related coursework that a student can complete at one higher education institution and are then eligible for full-credit value if the student transfers to another Tennessee higher education institution. Prior to the creation of these pathways, students would often lose credit for courses that were not accepted when transferring from one institution to another. These pathways are a significant step forward to enabling Tennessee's students to stay on target for a timely graduation.

The leadership (i.e., the Tennessee Board of Regents, the University of Tennessee System, and the Tennessee Higher Education Commission) responded that more pathways will be created, but that practicality and best practice have necessitated the exclusion of certain programs from the development of transfer paths. THEC will be working with the General Assembly to revise the statutory language to exclude certain majors, such as nuclear engineering and performance arts degrees.

The audit also noted that these pathways should be better publicized through the institution's websites to be more useful and available to students.

Dual Admissions Agreements

Not every community college and/or institution has signed a dual-admissions agreement with every other institution. The agreements allow students to be simultaneously registered with two institutions, allowing the student to use both schools' facilities and easily transfer credit hours between the two schools. Higher education leadership argued that best practice dictates that requiring agreements for institutions within close geographic proximity to each other is more appropriate.

Common Course-Numbering

As required by the Act, a common course-numbering system has been developed among the community colleges. Seeing the potential benefit, TBR management suggested expanding these efforts to extend to other institutions. University chief academic officers voiced concerns, and the expansion did not occur. As a result, discrepancies remain between parallel courses' numbering at universities and community colleges.

Governing boards' leaders stated that common course-numbering across all institutions would be theoretically ideal for students, but reported that this would be a massive undertaking unlikely to happen immediately.

Funding Formula Data Definition

Users need more instruction and better definitions on the data to collect for use in the funding formula. It is critical that definitions are clear to ensure consistent and equitable funding. The leadership acknowledged the value in improving the data dictionary for the funding formula.

The CCTA is a work in progress. THEC, TBR, and UT are addressing many of these issues.

Formula Data Not Audited

More verification should be done to ensure that the institutional data are as accurate and consistent as possible.

The audit recommends that the UT Board of Trustees and TBR need to start conducting full audits on all higher education institutions' data used in the funding allocation formula. These audits are necessary to ensure that the THEC's budget request and funding allocations for the state's higher education institutions are accurate.

The formula is displayed in a series of unusually complex spreadsheets that an average user would have trouble understanding.

Formula Should Be Further Documented

The formula is displayed in a series of unusually complex spreadsheets that an average user would have trouble understanding. THEC does not have a written narrative describing how the formula works. Management said there is a detailed PowerPoint presentation about the funding formula on its website, but that they saw value in developing a written narrative as well.

THEC's explanation of the funding formula is found at: http://www.tn.gov/thec/Divisions/Fiscal/fiscal_affairs.html

Funding Formula Mechanics

A broad range of higher education management participated in the development of the funding formula. The formula includes the two key aspects of productivity metrics and recognition of the institutional mission. The mission focus was a critical component in that some institutions focus on research and doctoral degrees and on the other extreme, some focus on student access and have less selective enrollment. Although some other states have incorporated outcomes in their funding models, Tennessee’s model is touted as both progressive and unique in higher education finance policy.

Throughout the year, the institutions collect data for certain outcomes relevant to their mission, such as student progression, degrees, research funding, and graduation rates. An extra premium is earned for low-income and adult student successes, thus incentivizing successful outcomes for these specific classes of individuals. After scaling the data, a predetermined weight is applied that reflects the priority of the outcome and the mission of the institution. These weights are used to determine what level of outcome funding is applied to each priority. For example, the University of Tennessee, Knoxville may have 15 percent weight on research funding and 40 percent spread across different degree attainment goals, including doctoral degrees, while APSU has 10 percent weight on research and 45 percent divided among bachelors and masters degrees. Community colleges, of course, have different identified outcomes based on student progression, awarding of certificates, and job placement.

The calculations are then monetized with an average Southern Regional Education Board (SREB) faculty salary multiplier and adjustments are made for fixed cost elements. Additional performance funding is available for goals like accreditations, student satisfaction, and licensure exam pass rates.

The state cannot necessarily support the amount calculated through this process, so the total amount of funding to be appropriated is then allocated to the schools on a pro rata basis, based on these outcomes-based calculations.

Some initial comparisons were done to determine the effects of this change. The results showed that while the changes could be significant in the long-term, the immediate effect was not overly drastic. To ensure that while the funding focus changed, no one institution would be immediately affected in a negative way, a hold harmless provision was incorporated to allocate a total of approximately \$30 million from fiscal year 2011–12 through fiscal year 2013–14.

2011 — 2012 State Appropriations based on Enrollment (hypothetical) vs. Outcomes (actual)

University	Enrollment Model	Outcomes Model	Percent
Austin Peay	\$25,017,700	\$25,028,100	0.0%
East Tennessee	\$44,149,100	\$43,971,600	-0.4%
Middle Tennessee	\$70,510,100	\$69,890,400	-0.9%
Tennessee State	\$28,269,900	\$28,096,600	-0.6%
Tennessee Tech	\$35,105,700	\$35,089,500	0.0%
Memphis	\$88,517,700	\$88,586,500	0.1%
UT Chattanooga	\$33,031,600	\$32,739,200	-0.9%
UT Knoxville	\$140,503,900	\$140,932,100	0.3%
UT Martin	\$23,373,800	\$23,222,200	-0.6%
Community Colleges	\$181,990,000	\$182,272,700	0.2%

Lessons Learned From Past Reform Efforts

The Basic Education Program (BEP) was created per the Education Improvement Act of 1992 as a method to allocate state K—12 funding to the various Local Education Agencies.

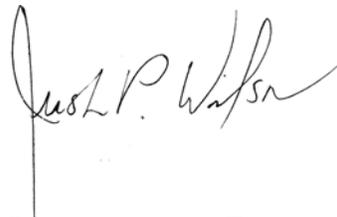
The formula was created to equitably distribute state funds based on several factors, including student attendance. Twenty years and several lawsuits later, the formula has been changed and tweaked so many times, it is virtually undecipherable and is not understandable or verifiable to the school systems affected by the funding. Education leaders are left with a poor roadmap for making future improvements to the formula. Over time, without documentation of the exact components of the formula, including clear notation about the timing and purpose of any changes to the formula, this could happen with higher education, as well. Particularly in an incentive-driven formula, it will be crucial for the state to keep the formula transparent and understandable in order to allow the institutions of higher education to meet their performance goals.

The BEP formula has been calculated using K—12 attendance figures that have not been verified over the years. Allocation based on self-reported data is a risky situation when the results affect the entities' funding. Most government entities are struggling to make ends meet in the current economic conditions, and that pressure could provide the right amount of incentive to attempt to overstate attendance figures. We have criticized the Department of Education's lack of verification and are hopeful that changes are being made to streamline reporting and verify the BEP numbers. For the Complete College Tennessee Act, THEC has the opportunity to verify performance data from the beginning, rather than having to change things years later after manipulations may have already occurred. As noted in the performance audit, I encourage the higher education leadership to audit the information.

The state should learn from these past oversights with the BEP and make changes now to avoid such complications years into the future. It is highly likely that various changes and modifications will be made to the CCTA funding formula over time. These alterations should be made through a process that is transparent and the underlying documentation of the calculation should be understandable and verifiable.

Conclusion

While some progress has been made, challenges remain ahead. Students have to be adequately prepared to enter college. The CCTA was designed to help students graduate with a high quality education. It makes significant changes to the funding formula. Funding is now based on student outcomes rather than enrollment. As such, it is more important than ever to monitor the academic integrity of Tennessee's public institutions. While the new formula may be appropriate, no agency outside the higher education community evaluates compliance or quality control. Independent oversight should be developed to ensure high academic standards and to monitor graduation rate assertions to ensure the integrity of the new funding formula.



Comptroller of the Treasury



Office of the Comptroller of the Treasury

State Capitol

Nashville, Tennessee 37243

(615) 741-2501

Justin.Wilson@cot.tn.gov

www.tn.gov/comptroller