

Tennessee Higher Education Profiles and Trends

Tennessee Higher Education Commission
February 2009

Purpose of This Report

T.C.A. §49-7-202 (c) (7) requires the Tennessee Higher Education Commission to “submit a biennial report to the governor and the general assembly, commenting upon major developments, trends, new policies, budgets and financial considerations which in the judgment of the commission will be useful to the governor and to the general assembly in planning for the sound and adequate development of the state’s program of public higher education.”

The purpose of this report, *Tennessee Higher Education Profiles and Trends*, is to provide state policymakers with a brief overview of Tennessee higher education within a regional and national context. This report presents data and analyses on seven policy issues important to the state: 1) State Economy and Higher Education, 2) Student Preparation, 3) Student Participation, 4) Student Retention and Completion, 5) Finance, 6) Tuition and Financial Aid, and 7) Student Learning and Engagement.

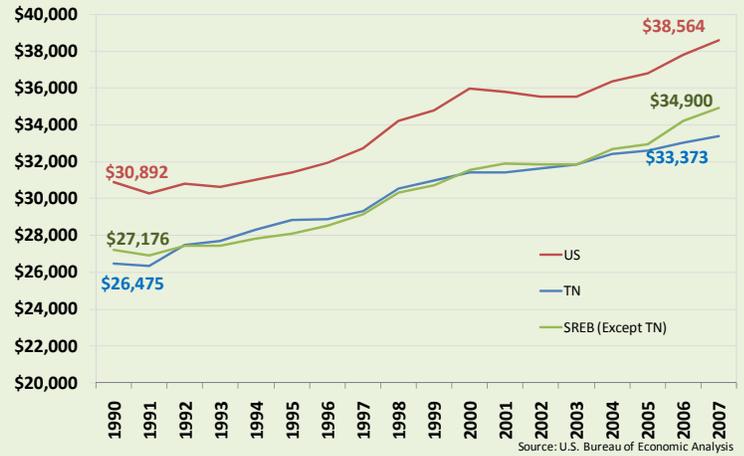
1. State Economy and Higher Education

- Figure 1** shows the relationship between states’ educational attainment levels and personal income per capita. Educational attainment levels are characterized by the percentage of working-age adults with a bachelor’s degree or higher. This metric often corresponds to a state’s ability to attract business and industry. The other metric, personal income, has implications for citizens’ quality of life and a state’s ability to raise revenue. In 2007, Tennessee’s average per capita income was \$33,373. This ranks 39th in the nation. Meanwhile, 23.5% of Tennesseans have at least a bachelor’s degree, which was ranked as the 44th in the nation.
- These factors are linked to a state’s economic competitiveness. The orange-coded states scored in the top ten on the New Economy Index, a compilation of 26 indicators of potential success in the knowledge-based high-tech global economy. The majority of these ten “new economy” states exceeded national averages for educational attainment and personal income. Tennessee ranked 36th in the New Economy Index in 2007.



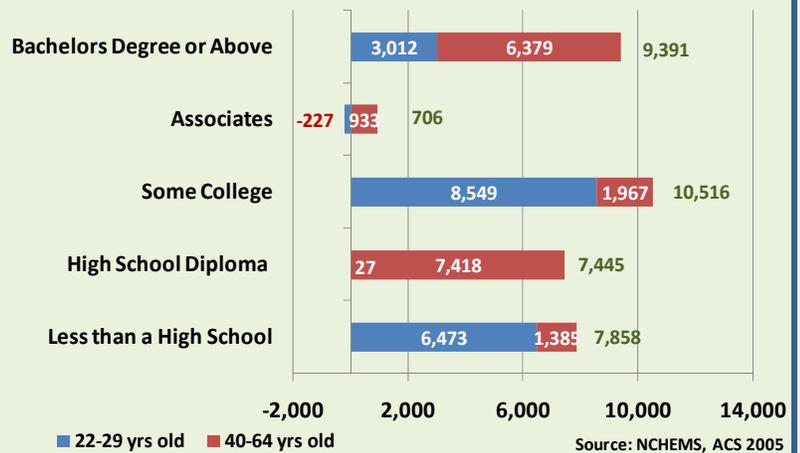
- Tennessee’s personal income per capita has grown consistently over the past 15 years, even after adjustment for inflation. However, as shown in **Figure 2**, Tennessee remains below the national and SREB average.

Figure 2:
Personal Income per Capita, 1990 - 2007
US, Tennessee, and SREB States (Adjusted by CPI-U)



- Figure 3** shows Tennessee’s success in attracting out-of-state workers with various levels of educational attainment. In 2005, Tennessee imported approximately 10,000 working-age adults with an associate’s degree or higher. It is a good sign that the state economy attracts educated workers. However, the majority of Tennessee’s net in-migration come from workers without a college-degree.

Figure 3:
Annual Net Migration by Age Group and Degree-Level, 2004-05, Tennessee



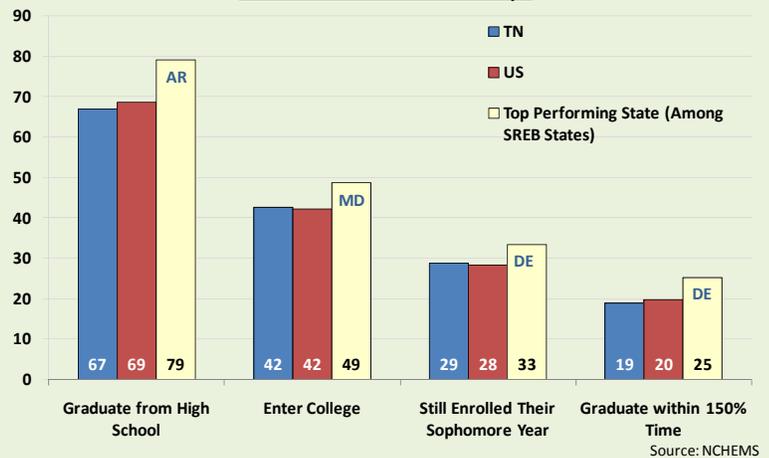
2. Student Preparation

Tennessee’s Education Pipeline

- The success of higher education depends greatly upon the success of the K-12 public education system. College preparation at the high school level often determines students’ future opportunities. Many studies show that a student’s high school academic performance correlates with the likelihood of graduation from college².
- As **Figure 4** shows, Tennessee’s educational pipeline productivity trails the national average. Only 19 of 100 ninth-grade students graduate from college within a regular timeline. Tennessee trails in high school graduation rate but approximates the national average at every other transition point, affirming the need for secondary and postsecondary education to work together to improve educational attainment in Tennessee.

Figure 4:
Tennessee Educational Pipeline, 2006

Of 100 Ninth Graders, How Many...



High School Graduation Rates

Tennessee’s public high school graduation rate was 66.9% in 2006-07, up from 55% in 2000 (Figure 5)³. However, the current rate is still below the national average. Completing high school is the most basic requirement for admission to college. Thus, raising high school graduation rates must remain a high priority.

Figure 5:
Public High School Graduation Rate, from 1995-06 to 2006-07, US, Tennessee, and SREB States

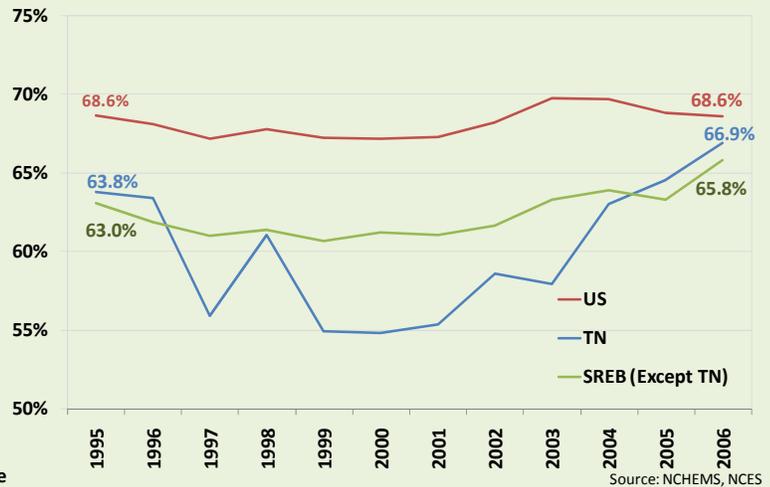
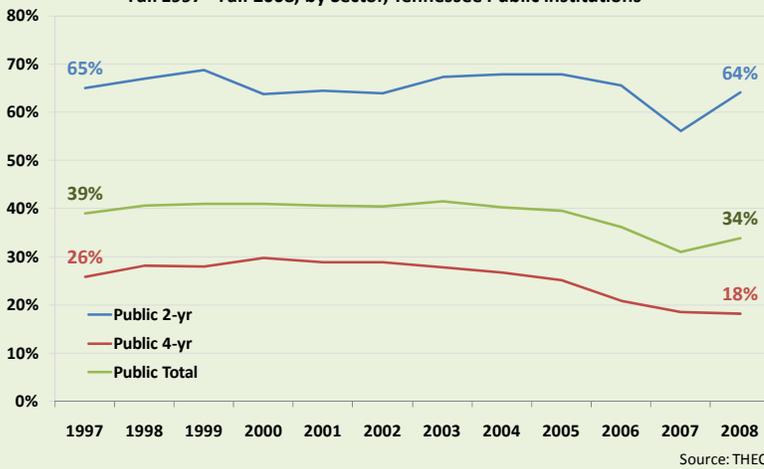


Figure 6:
First-time Freshmen (18 Years of Age and Younger) Taking at Least One Remedial or Developmental Course as a % of Total First-time Freshmen, Fall 1997 - Fall 2008, by Sector, Tennessee Public Institutions



Remedial Education

High school diplomas, while necessary for college admission, are not always sufficient to guarantee college readiness. In Fall 2008, 34% of Tennessee public college freshmen were required to take at least one remedial or developmental course⁴ (Figure 6). While the state total is at a lower level as compared to 10 years ago, higher education and K-12 communities should continue to work collaboratively to align college and high school

curricula.

3. Student Participation

Traditional Students

- In recent years, the percent of Tennessee’s high school graduates who go to college has increased. In 2006, 63.5% of high school graduates attended college immediately after high school graduation, up from 47% in 1992 and outpacing the rate of increase regionally and nationally (Figure 7). Tennessee ranked 22nd in the nation in 2006 on this measure.

Figure 7:
College-going Rates of High School Graduates Directly from High School, Tennessee, US, and SREB States, 1992-2006

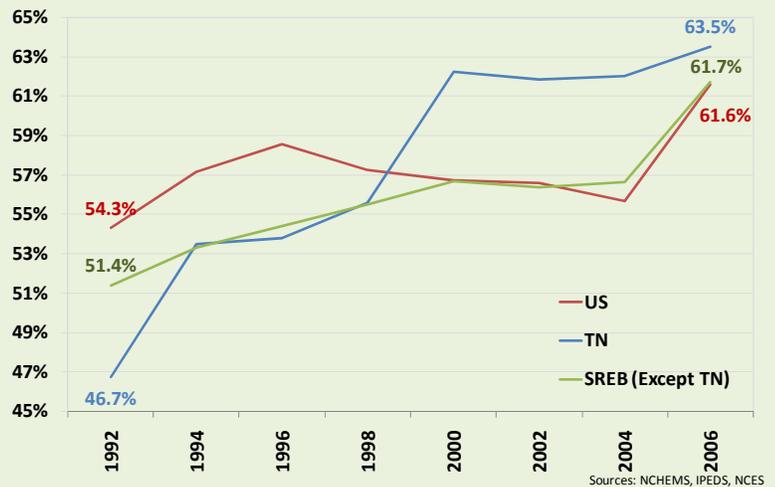
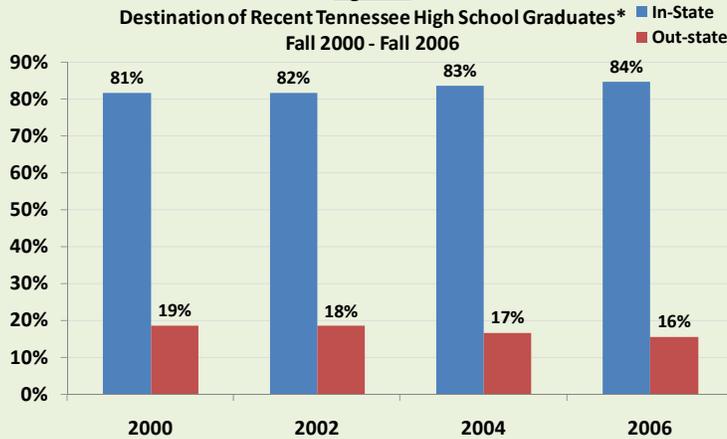


Figure 8:

Destination of Recent Tennessee High School Graduates*
Fall 2000 - Fall 2006



*First-time enrolling freshmen who graduated from public and private high school during past 12 months

Source: IPEDS Residence and Migration Survey

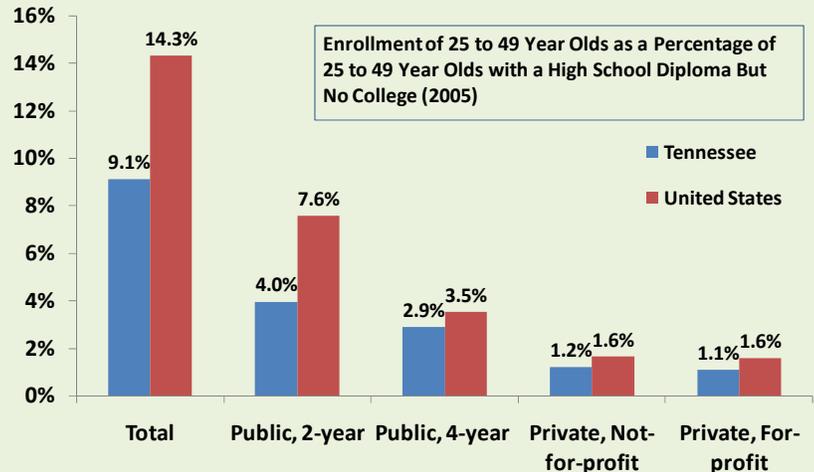
- One of the purposes of the Tennessee Education Lottery Scholarship (TELS) is to retain talented students within the state. Data from the National Center for Education Statistics (NCES) indicate that Tennessee high school graduates have become more likely to enroll in state institutions over the last several years (**Figure 8**). It is too soon to determine whether this upward trend is a direct consequence of the TELS program.

Adult Students

- Tennessee’s adult participation rate is far below the national average. In 2005, Tennessee higher education enrolled 9.1% of adults aged 25-49 whose highest credential is a high school diploma. This percentage trails the national average of 14.3% and ranks 45th nationally (**Figure 9**). This leaves approximately 675,000 of Tennessee adults who are prime candidates for higher education but are not enrolled.
- **Figure 10** displays the enrollment trend of adult students for the last 10 years. Adult enrollment has recently declined at Tennessee’s public 2-year institutions. The adult enrollment at public 4-year universities has hovered at around 23,000 for the last several years, but this enrollment is still below the level of 1996.
- Private institutions represent a growing sector for adult enrollment. These institutions increased adult enrollment by 228% from 1997 to 2007⁵. For-profit institutions have greatly contributed to the growth of this sector.

Figure 9:

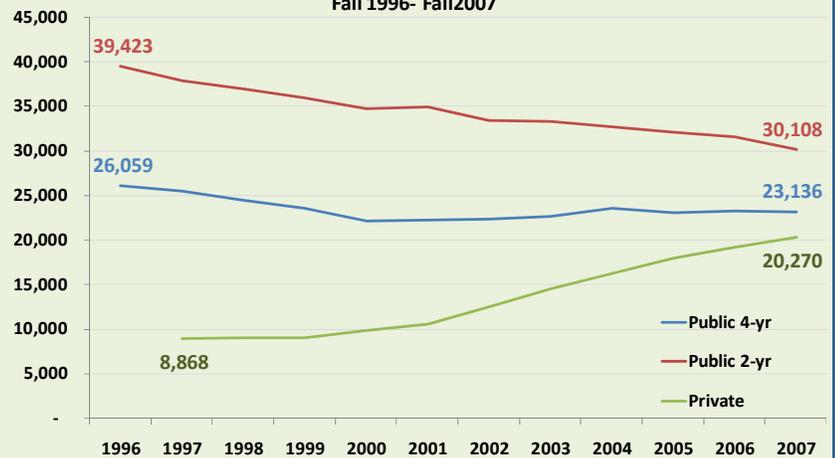
Adult Participation Rate, Tennessee & US, 2005



Source: NCHEMS, IPEDS Residence and Migration Survey

Figure 10:

Undergraduate Enrollment Headcount: 25 Years Old or Above, Tennessee Public 2-year, 4-year, and Private Institutions, Fall 1996- Fall 2007

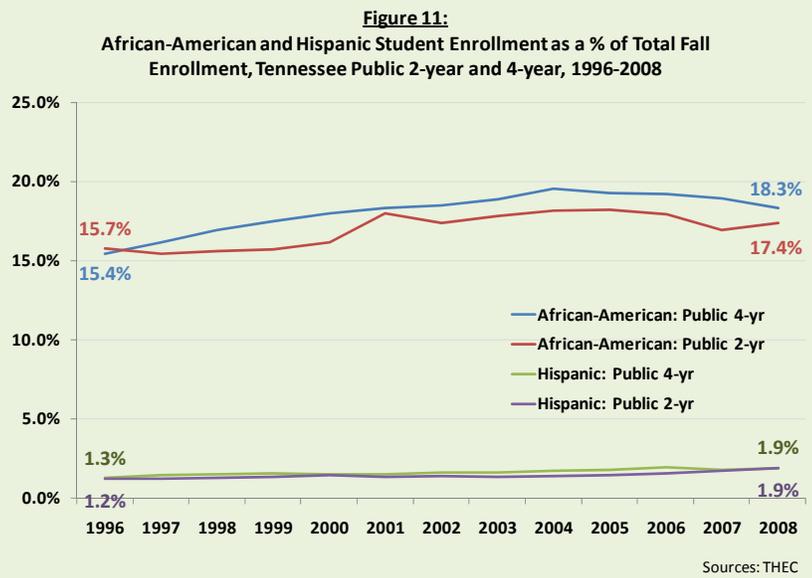


*Private institutions' data are estimated for even years

Sources: IPEDS, THEC

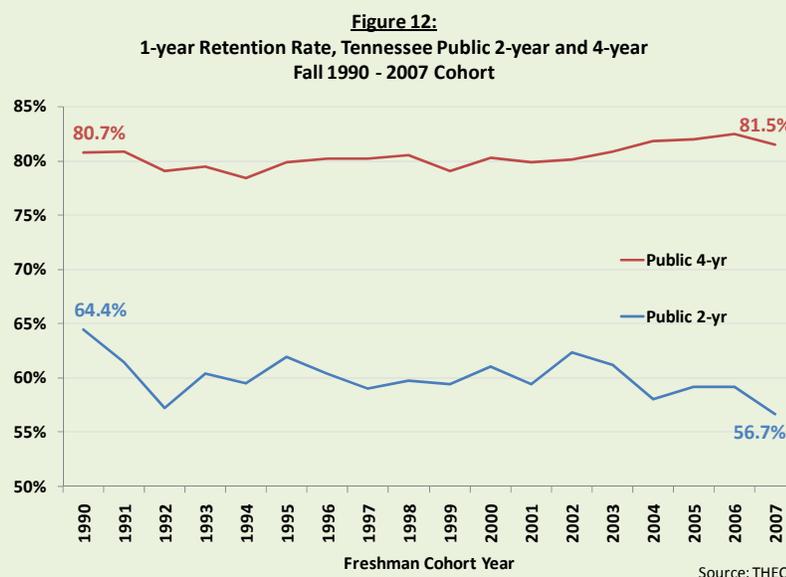
Minority Students

The race/ethnicity profile of Tennessee’s higher education student bodies has slightly changed over the past 12 years. At public 4-year institutions, the enrollment share represented by African-American students increased from 15% to 19% from 1996 to 2008. African-American enrollment share also increased at community colleges, from 15% in 1996 to 18% in 2006. The small share of Hispanic students has also slowly but steadily increased at both 2-year and 4-year institutions (Figure 11).

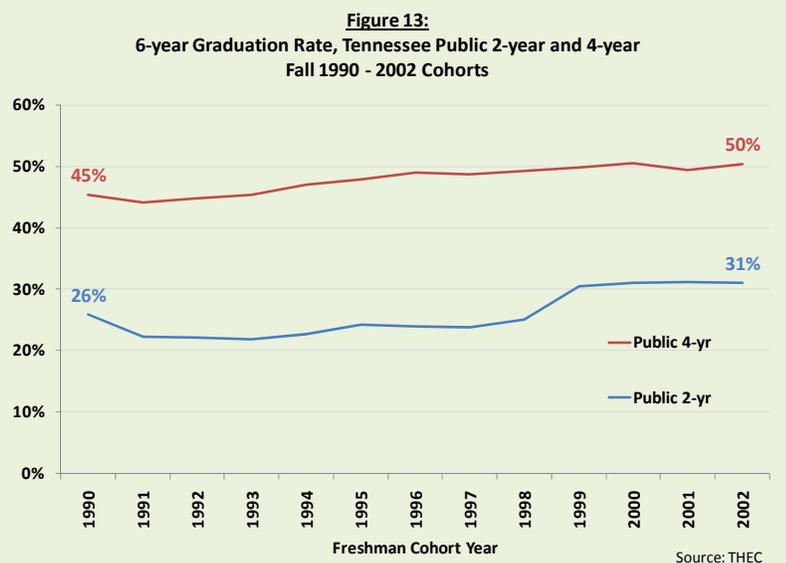


4. Student Retention and Completion

- Many observers affirm that the first year of college is critical in setting the stage for student success. Generally, dropout rates are largest at the freshman level⁶. Tennessee 4-year institutions’ retention rate has consistently hovered at around 80%. However, community colleges’ retention rate dropped from 64% in 1990 to 57% in 2007 (Figure 12).



- The 6-year graduation rate is widely used as a measure of student success and institutional productivity. Over the past ten years, this rate has increased at both Tennessee’s 2-year and 4-year institutions (Figure 13).



5. Finance

- Over time, inflation, enrollment growth, and quality improvements have combined to outpace nominal year-over-year increases in state appropriations for higher education's general operating expenses. This has led to an increased reliance on tuition revenues. In 1998, tuition revenues comprised 38% of total institutional revenue for general operating purposes⁷. This share increased to 53% in 2008-09 (**Figure 14**)⁸.

Figure 14:
Total Revenues, State Appropriations, and Tuition Revenues per FTE:
Public Total (Inflation Adjusted for HECA*)

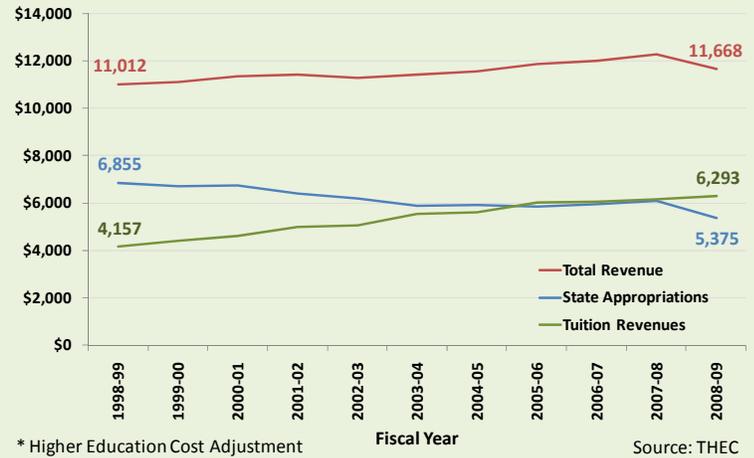
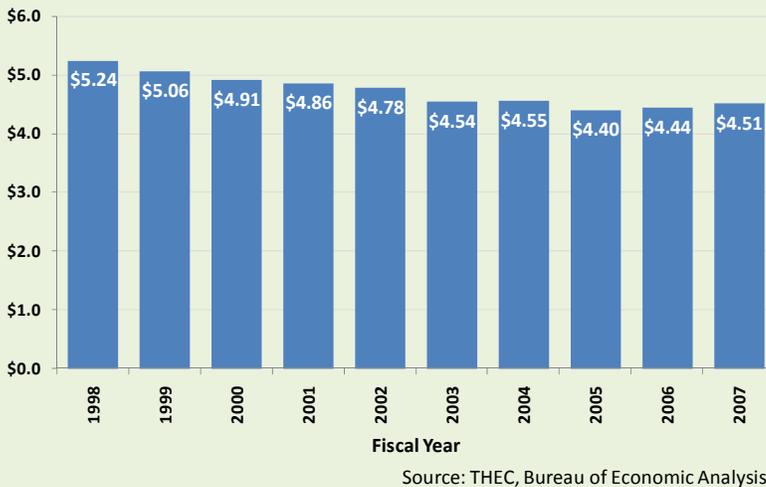
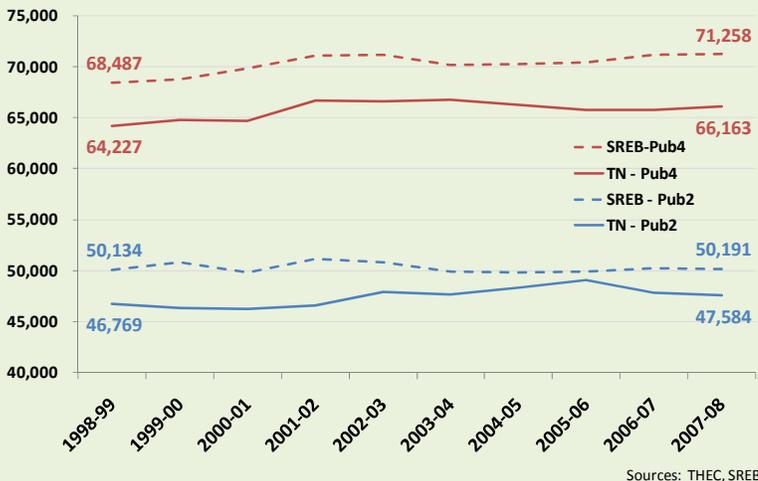


Figure 15:
State Appropriations to Public Institutions per \$1,000 of Personal
Income, Tennessee, 1998 - 2007



- Figure 15** indexes the amount of state appropriations for general operating expenditures of public higher education against the gross personal income of the population. This measure illustrates how much Tennesseans spend, via taxes, on higher education per \$1,000 income. The index illustrates that higher education spending has not kept up with the increasing state wealth indicated by personal income growth in **Figure 2**.

Figure 16:
Average Faculty Salary, All Ranks, Public 4-yr and 2-yr, FY 1998- FY 2008
Tennessee vs. SREB States (Adjusted by CPI-U)

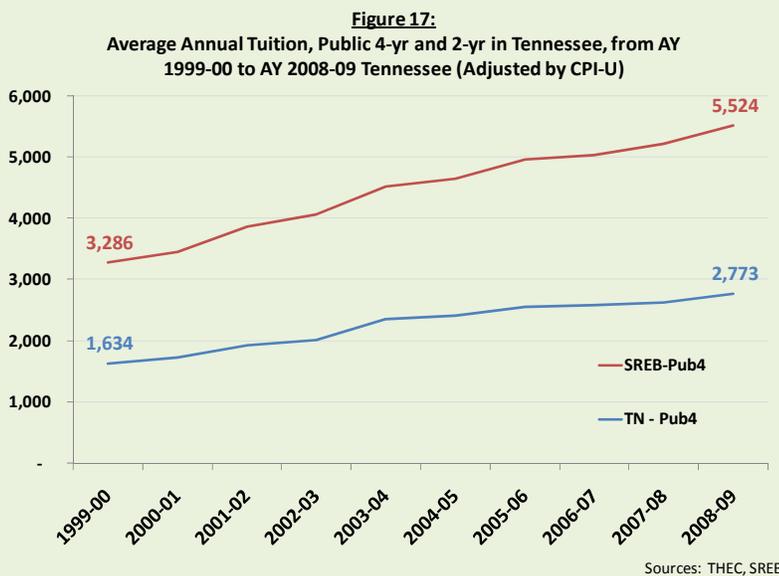


- As **Figure 14** indicated, total institutional revenue has grown. This implies that the cost of education has also risen. Identifying precisely the reasons for the cost increase is difficult. One popular speculation is that faculty salary growth may be responsible. However, the data (**Figure 16**) do not conclusively show that salaries are responsible for increasing costs. Other factors such as utilities, technology, and employees' benefit costs may contribute to the cost increase.

6. Tuition and Financial Aid

Tuition

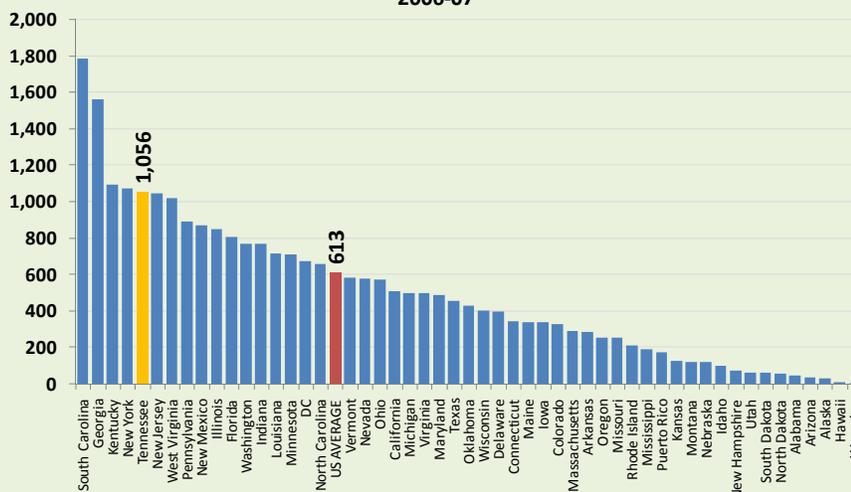
Figure 17 shows that average tuition rates at Tennessee public institutions in constant dollars. The figure illustrates that these rates have grown continually over the last 10 years even after adjustment for inflation, implying that the tuition growth rate has increased at a rate exceeding inflation. In 2007-08, the average tuition at 4-year institutions is \$5,524 per academic year. This is 68% higher than 10 years ago in constant dollars. Meanwhile, on average, community colleges charge students \$2,773 per academic year. This is a 70% increase over 10 years ago, after adjustment for inflation. However, these prices are the “sticker prices” and do not take into account varying types of financial aid assistance.



Financial Aid

In response to increasing tuitions, Tennessee recently strengthened its commitment to alleviating students’ financial burden. In 2003, the Tennessee General Assembly initiated the Tennessee Education Lottery Scholarship (TELS) program to aid students. Funded from lottery profits, TELS awards scholarships to eligible students. In 2007-08, the TELS program reached maturity. After implementation of this program, Tennessee’s ranking on grant amount per undergraduate student jumped to 5th among states in 2006-07 (**Figure 18**). This represents remarkable progress given that Tennessee ranked 32nd a decade ago.

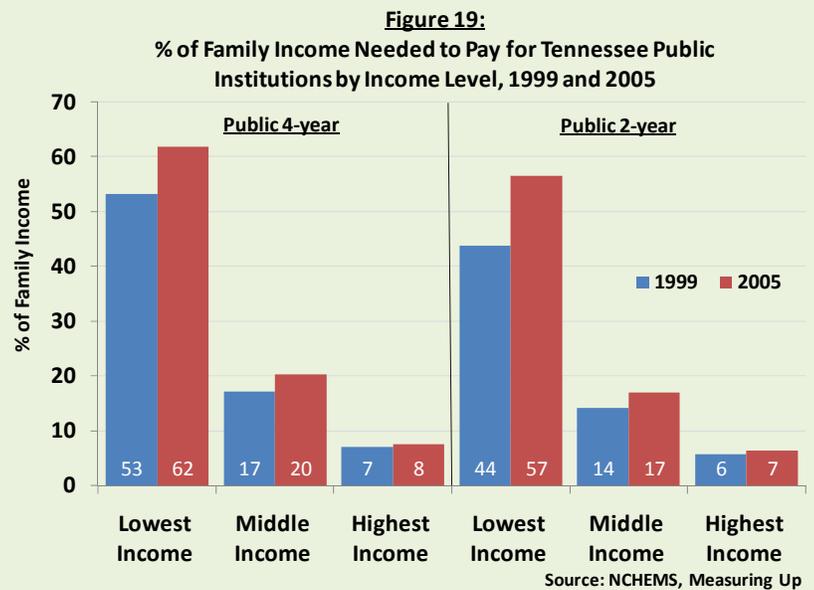
Figure 18:
State Grant Aid (Both Merit- and Need-based)per Undergraduate FTE (Both Public and Private) 2006-07



Source: NASSGAP

Affordability

Figure 19 shows the extent to which the tuition rise has placed financial pressures on household budgets. The chart differentiates families by income level. Unsurprisingly, tuition impacts lowest income families the most. For public 4-year institutions, a student from a lower income family will need to spend 62% of family income for tuition. This represents a nine percentage point increase since 1999. Meanwhile, public 2-year tuition requires 57% of the total family budget for college education, a 13 percentage point increase compared to six years ago. For middle- and upper-income classes, the financial pressure has increased by three and one percentage points, respectively, since 1999.



7. Student Learning and Engagement

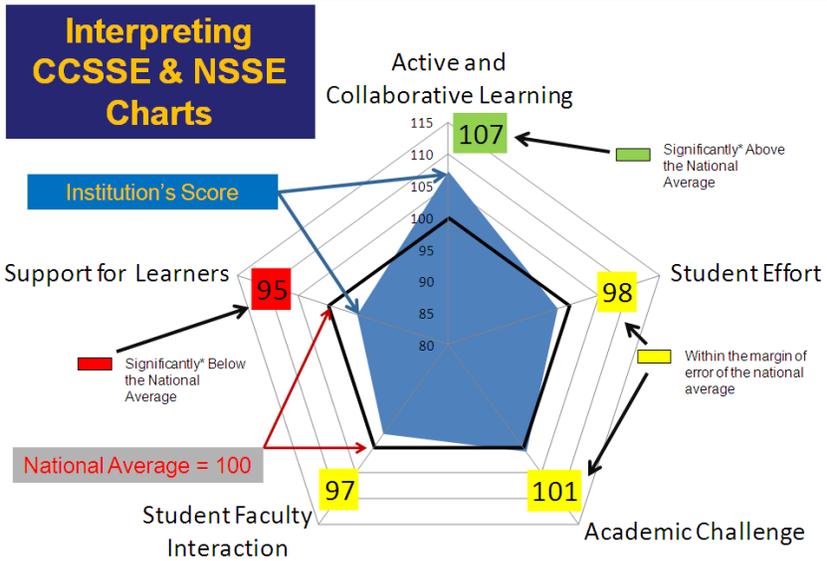
- Despite its centrality to higher education, student learning has not been widely measurable. The National Survey of Student Engagement (NSSE) and the Community College Survey of Student Engagement (CCSSE) attempt to provide valid empirical information on institutional quality by measuring student behaviors. Specifically, these surveys measure student engagement with academic college life. Such data are important because numerous studies have correlated student learning progress with academic engagement. In 2006, all Tennessee public 4-year and 2-year institutions participated in NSSE and CCSSE, respectively, as a result of the Tennessee Performance Funding program.

- To help policymakers better understand an institution’s strengths and weaknesses, NSSE and CCSSE developed five benchmarks to capture important aspects of the student experience (see **Chart 1** on right). The benchmark score demonstrates the effectiveness of institutional educational practices.

Chart 1: Student Engagement Benchmark - CCSSE vs. NSSE

	CCSSE (2-year)	NSSE (4-year)
Sample	Full-time, Part-time	Freshmen, Senior
Benchmark Dimension	Academic Challenge	
	Active and Collaborative Learning	
	Student-Faculty Interaction	
	Support for Learners	Supportive Campus Environment
	Student Effort	Enriching Educational Experiences

- As **Figure 20a** and **20b** show, CCSSE results indicate that Tennessee’s community colleges are on par with the national average. However, according to NSSE data (**Figure 20c** and **20d**), Tennessee’s public 4-year institutions underperform national averages for student engagement. For freshmen, Tennessee public universities’ underperform the national average by a statistically significant level in all student engagement benchmarks. Concerning senior students, three out of the five benchmark scores are significantly lower than the national average. Further study is needed to understand these shortcomings in student engagement at 4-year institutions.



CCSSE

Figure 20a:
Tennessee Public 2-year Institutions
Full-time Students

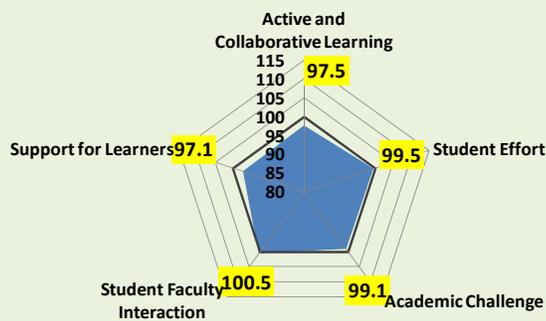
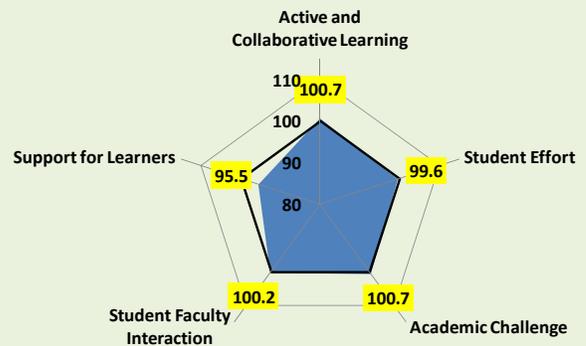


Figure 20b:
Tennessee Public 2-year Institutions
Part-time Students



□ US Average ■ Tennessee

NSSE

Figure 20c:
Tennessee Public 4-year Institutions
Freshmen

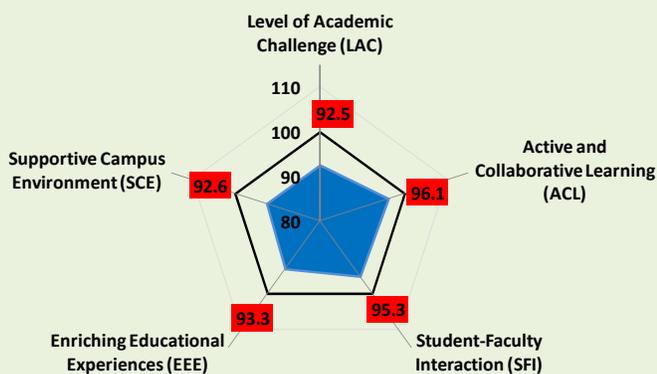
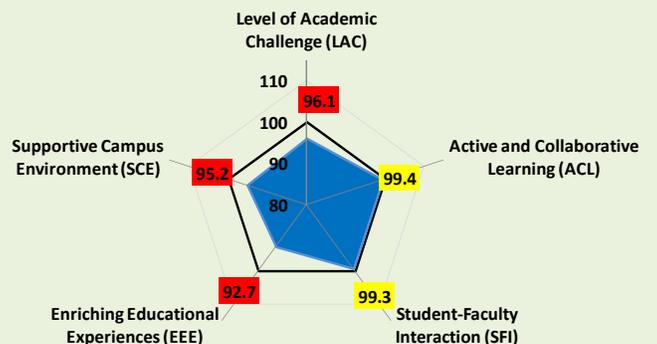


Figure 20d:
Tennessee Public 4-year Institutions
Senior



*Significant Level = 0.05

Notes:

1. The indicators in the New Economy Index are grouped under five categories: Knowledge Jobs, Globalization, Economic Dynamism, The Digital Economy, and Innovation Capacity.
2. Many studies on this topic can be found at: <http://www.act.org/path/policy/reports/index.html>
3. Tom Mortenson, Postsecondary Education OPPORTUNITY, <http://www.postsecondary.org/>
4. Remedial courses are designed to assist students in developing the basic skills (i.e. reading, writing, and math) necessary to succeed college level courses.
5. For for-profit institutions, enrollment data are available for Title IV (i.e. Federal Student Aid program) participating institutions only. Thus, their data do not reflect total proprietary enrollment in Tennessee.
6. Source: NCHEMS, HigherEdInfo.org
7. Non-state and non-tuition revenue sources are not part of the total revenue because those funds are principally available for auxiliary enterprises, research, hospital operations, and other non-instructional programs and services.
8. Funding from lottery profits is not included in state appropriations.