College for all Texans


# Closing the Gaps
# 2014 Progress Report

**June 25, 2014**

**Planning and Accountability**

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## Texas Higher Education Coordinating Board



## Mission of the Coordinating Board

The Texas Higher Education Coordinating Board's mission is to work with the Legislature, Governor, governing boards, higher education institutions and other entities to help Texas meet the goals of the state's higher education plan, Closing the Gaps by 2015, and thereby provide the people of Texas the widest access to higher education of the highest quality in the most efficient manner.

## Philosophy of the Coordinating Board

The Texas Higher Education Coordinating Board will promote access to quality higher education across the state with the conviction that access without quality is mediocrity and that quality without access is unacceptable. The Board will be open, ethical, responsive, and committed to public service. The Board will approach its work with a sense of purpose and responsibility to the people of Texas and is committed to the best use of public monies. The Coordinating Board will engage in actions that add value to Texas and to higher education. The agency will avoid efforts that do not add value or that are duplicated by other entities.

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# Introduction

***Closing the Gaps: The Texas Higher Education Plan*** was adopted in October 2000 by the Texas Higher Education Coordinating Board (THECB). The goal of the *Closing the Gaps* (*CTG*) plan is to close educational gaps in participation, success, excellence, and research within Texas and between Texas and other states by 2015. This 2014 progress report, the 12th annual progress report from the THECB, shows that many gaps have been closed or are within reach of being closed by 2015.

The statewide goal for participation – to enroll 630,000 more students in fall 2015 than in fall 2000 – is within reach, but Texas' public, independent, and career institutions will need to reverse the 14,000-student decline of fall 2013 to meet the goal. The state will need to add approximately 27,000 students in fall 2014 and another 27,000 in fall 2015. African Americans reached targeted enrollment in fall 2009 and continued to add students every year thereafter, except for a modest decline in 2013. Hispanic students, however, are not on track to reach 2015 participation targets; Hispanic enrollment grew in 2013, but at a decelerating pace. White enrollment continued on a downward trend for the fourth straight year.

Student participation is critical, but it is not enough. Students must persist in their studies and graduate with degrees or certificates for Texas to truly achieve its higher education and economic goals. The major success goal of *CTG* by 2015 is for Texas institutions of higher education to award 210,000 undergraduate awards: bachelor's degrees, associate degrees, and certificates (BACs). When *CTG* began in 2000, students earned 116,235 undergraduate awards. The 2015 goal was reached in only 11 years, when the state's institutions awarded more than 221,000 BACs in FY 2011. In FY 2013, the total reached nearly 243,000 awards. Six of nine other success targets were met in FY 2011, 2012, or 2013, and the number of awards has continued to grow for all six metrics. Unfortunately, the state is not on track to reach targets for the other three success metrics: total initial teacher certifications; math and science initial teacher certifications; and science, technology, engineering and math (STEM) BACs.

Some *CTG* goals for institutional excellence have been met, including nationally recognized programs of study, but public institutions will need to target specific measures of excellence to reach top 10 recognition by major ranking organizations by 2015. Texas public universities and health-related institutions reached the *CTG* target for research expenditures seven years early, in FY 2008, and have increased those expenditures every year thereafter, except in 2012. However, the share of the national total of federal obligations for science and engineering research and development (R&D) at Texas public and independent institutions fell to 5.2 percent in FY 2011, far below the goal of 6.5 percent.

Many initiatives have been implemented to improve Texas' higher education outcomes since *CTG* began. House Bill (H.B.) 2550, passed in 2013 by the 83rd Texas Legislature, Regular Session, continued that tradition. This legislation directs higher education institutions to collaborate with Texas high schools whose graduates have low college-going rates. The goal is to improve these rates, with special emphasis on dual credit opportunities and African-American male and Hispanic enrollment in higher education. This legislation also directs the Coordinating Board to report on the elements and results of plans developed by institutions, in the annual *CTG* progress report. The first annual report on H.B. 2550 appears at the end of this report.

# *Closing the Gaps* 2014 Progress Summary

**Statewide Goal for Participation: By 2015, close the gaps in participation rates to add 630,000 more students.**

- The final statewide goal is within reach, but Texas will need to enroll approximately 27,000 more students in both fall 2014 and 2015 at public, independent, and career institutions to meet the goal. On average, more than 44,000 students have been added each year since fall 2000, but enrollment growth has slowed in recent years and fell by nearly 14,000 students in fall 2013.
- Enrollment at public two-year institutions fell by over 12,000 students in fall 2013, the second straight drop. Career school enrollment was down almost 10,000 students. Public four-year institutions (including health-related institutions) tempered some of the loss by adding more than 8,000 students to their headcount.
- African Americans reached the final enrollment target in fall 2009, six years before the final deadline. African Americans continued to add more students every year thereafter, except for a drop of about 4,500 students in fall 2013. Despite the drop, this population remained far above the 2015 target. Hispanics and whites, however, are not on track to reach their final targets. Hispanic enrollment growth is decelerating, with only 11,000 students added in fall 2013, and white enrollment dropped for the fourth consecutive year by the largest drop ever, more than 20,000 students.
- The gender gap in participation has grown for all three of the major racial/ethnic groups. African-American females continued to have the highest participation rate in Texas higher education in fall 2013 at 9.3 percent of their statewide population, but African-American males lagged that percentage by 3.5 percentage points. Hispanic and white females both participated at a 6.1 percent rate of their populations, but Hispanic males participated at just a 4.3 percent rate and white males were only at 4.9 percent.

**Statewide Goal for Success: By 2015, award 210,000 undergraduate degrees, certificates, and other identifiable student successes from high-quality programs.**
The 2015 goal requires awarding 93,765 more bachelor's degrees, associate degrees, and certificates (BACs) than in 2000.

- Most goals and targets have been met. The major goal, 210,000 undergraduate awards by FY 2015, was met in FY 2011, and the number of awards has increased thereafter to nearly 243,000 in FY 2013.
- The targets for statewide associate degrees, African-American BACs, and statewide doctoral degrees were met in FY 2011. Targets for statewide bachelor's degrees and Hispanic BACs were reached in FY 2012. The number of awards has continued to increase for all of these metrics. The target for allied health and nursing BACs was surpassed in FY 2013.
- The three remaining success targets – STEM BACs, overall initial teacher certifications, and teacher certifications for math and science – are far from reach. Both categories of teacher certifications would need to more than double to reach the targets.

**Statewide Goal for Excellence: By 2015, substantially increase the number of nationally recognized programs or services at colleges and universities.**

- *U.S. News & World Report* (*U.S. News*) has never ranked any Texas institution among the top 10 national public universities during the *CTG* period.
- Based on data in the 2012 report from The Center for Measuring University Performance (CMUP), The University of Texas at Austin (UT-Austin) was tied for 13th place and Texas A&M University (TAMU) was tied for 17th place among top public research universities. UT-Austin was last ranked in the top 10 in 2007 by the CMUP; TAMU has never been in the top 10. The CMUP does not compute ranking numbers, but their data can be used for this purpose.
- Despite the lack of top 10 rankings among Texas public institutions, there are many excellent, nationally recognized programs at these institutions. For example, the accounting programs at UT-Austin's undergraduate and graduate business schools were ranked no. 1 among public and independent institutions in the 2014 "Best Colleges" publication from *U.S. News*, and its undergraduate business school marketing program was ranked no. 3. UT-Austin and TAMU had two "top five" undergraduate engineering programs in *U.S. News*. The program in health care law at the University of Houston was ranked no. 9.
- Several community colleges have been recognized for outstanding programs during the *CTG* period. Richland College was the first community college ever to win the prestigious Baldrige Award. Temple College's Texas Bioscience Institute is an innovative program that has won several awards including a THECB Star Award in 2013. The Alamo Area Academies, which also targets STEM areas, is another example of excellence and innovation.

**Statewide Goal for Research: By 2015, increase the level of federal science and engineering research and development obligations to Texas institutions to 6.5 percent of obligations to higher education institutions across the nation.**

- Texas seemed to be on track for reaching the goal in FY 2003 when its federal obligations for science and engineering R&D to public and independent institutions were 6.1 percent of the national total. However, Texas institutions' share never went higher than 5.9 percent thereafter, and in FY 2011 (the most recent year with available data), the share fell to 5.2 percent, the lowest since *CTG* began.
- Texas public universities and health-related institutions surpassed the 2015 *CTG* research target of $3 billion in R&D expenditures in FY 2008, when the institutions reported $3.1 billion in expenditures. Expenditures continued to climb and reached $3.79 billion in FY 2013.
- The Texas A&M Center for Innovation, a National Biosecurity Laboratory that opened in summer 2012, may enhance the state's share of federal R&D obligations when those data are next released. A federal biocontainment laboratory, the Galveston National Laboratory located at the University of Texas Medical Branch, contributes to Texas' share as well.

# *Closing the Gaps* in Participation

**Goal: By 2015, close the gaps in participation rates to add 630,000 more students.**

Increased participation is the first step toward increasing student success and reaping the benefits of closing the gaps in higher education. Targets for the participation goal were set so that, by fall 2015, enrollment in higher education at public, independent, and career institutions would be 5.7 percent of the Texas population (all ages) for each of four categories:

- Statewide
- Hispanic
- African American
- White

For example, the statewide enrollment target – to add 630,000 students by 2015 – is based on enrollment reaching 5.7 percent of the projected population for 2015. Because the original enrollment targets were based on population projections that have been superseded by more recent projections, reaching an enrollment target does not necessarily mean that participation will be 5.7 percent of the new projected population figure.

In this year's (2014) progress report, fall 2012 and 2013 enrollment data use one-year-old career school figures as proxies for statewide tabulations, as well as for breakouts by gender, ethnicity, and so forth. The content found in the appendices also uses these data. Prior to fall 2012, the two-year-old career school data are still used. For all years, and for all levels of aggregation and appendices, including baseline student counts, flex-entry enrollment (student enrollment that occurs after the class census date) has been added. These adjustments were introduced in the 2013 *CTG* progress report.

**Participation Goal: By 2015, close the gaps in participation rates to add 630,000 more students. Increase the overall Texas higher education participation rate from 5.0 percent in 2000 to 5.6 percent by 2010 and to 5.7 percent by 2015.**

**Participation enrollment growth figures show enrollment changes since fall 2000. Data for the figures may be found in the Appendices.**

- A total of 1,614,646 students participated in Texas higher education in fall 2013. This was 6.2 percent of the total 2013 population, exceeding the goal for the final participation rate. The total put Texas above the trend line target of 539,683 but still fell short of the number of students needed to reach 5.7 percent of the projected 2015 population.
- Enrollment dropped for the first time since *CTG* began, by nearly 14,000 students. The state will need to add approximately 27,000 students in both 2014 and 2015 to reach the final goal.
- African Americans continued to have the highest participation rate among the three major racial/ethnic groups, as 7.6 percent of this population was enrolled in higher education in fall 2013. Whites participated at a 5.5 percent rate (down 0.2 percentage point from 2012), followed closely by Hispanic participation at 5.2 percent.
- Since 2000, females have participated in higher education at a higher rate than males, and this gap has grown nearly every year. African Americans had the largest gender gap in 2013, with 9.3 percent of African-American females of all ages participating, compared to 5.8 percent of African-American males.

Figure 1.

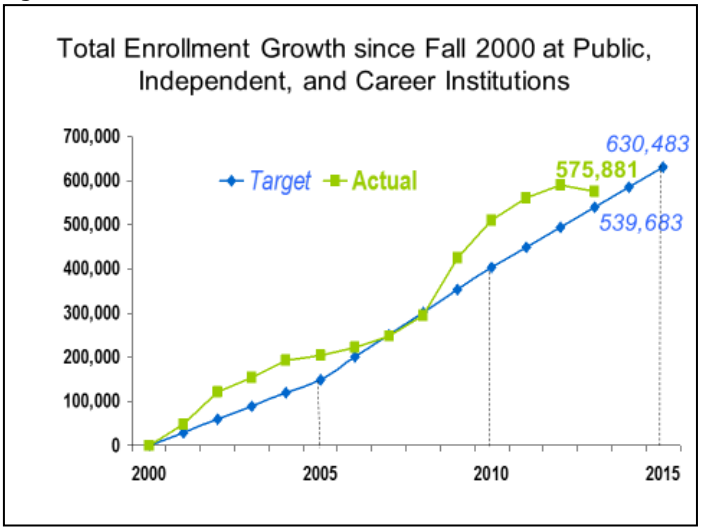
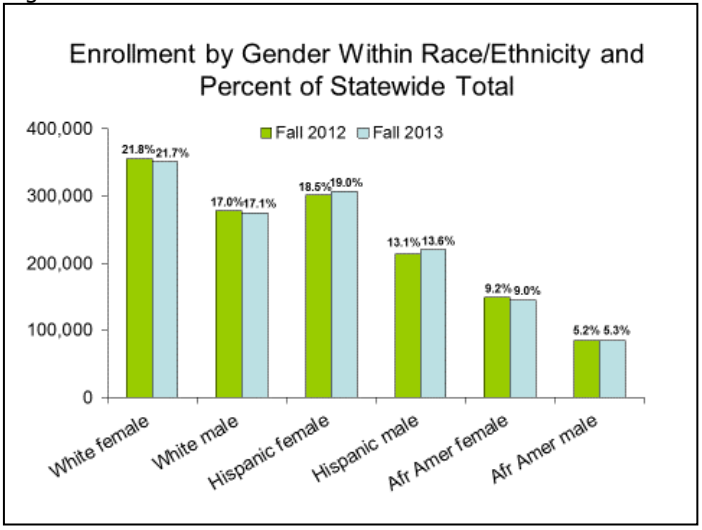


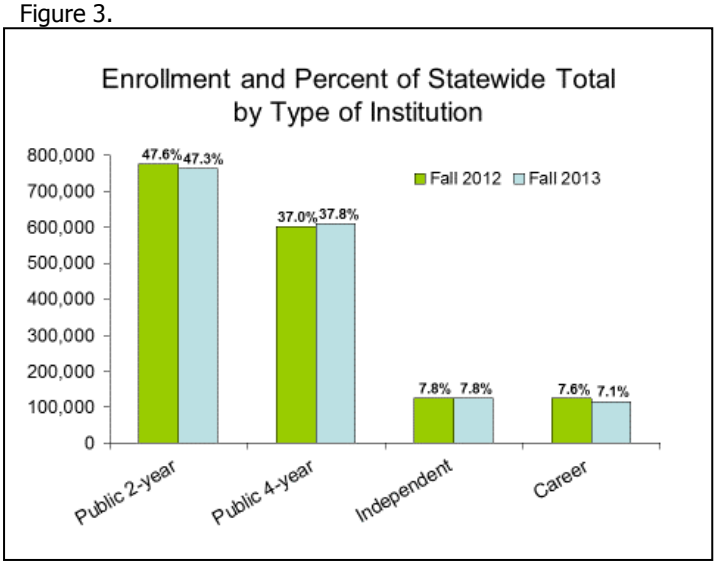

Figure 2.




- Understanding shifting demographic trends in Texas has been an important component of planning for growth and efforts to reduce gaps in Texas higher education. For example, Hispanic males' share of total enrollment in Texas higher education grew from 13.1 percent to 13.6 percent between 2012 and 2013 as their enrollment grew by nearly 5,800 students, or 2.7 percent. Although this was the fastest growth among the six major racial/ethnic and gender groups, Hispanic males are still underrepresented in higher education. Conversely,

the white population in Texas is aging and the percentage of traditional college-aged whites has decreased, no doubt a contributing factor in white enrollment drops seen in the last several years.

Figure 3.




- Enrollment at public two-year institutions fell by more than 12,000 students, the second straight yearly drop. This reduced the sector's share of statewide enrollment from 47.6 percent to 47.3 percent. Enrollment also fell at career schools, with a loss of nearly 10,000 students.
- An innovative change in state funding for community colleges implemented in 2013 allows for a portion (approximately 10 percent) of an institution's funding to be based on "Success Points." As students successfully progress through milestones, success points affiliated with funding are awarded for student achievements such as completing developmental education and first college-level course requirements, acquiring 15 or 30 semester credit hours, transferring to a four-year institution, and earning a degree or other award. By dedicating additional resources to help students move toward success in these critical areas, institutions could begin to reverse recent downward trends in participation at community colleges.
- Public four-year institutions (including health-related institutions) made up for some loss in enrollment at two-year and career institutions by adding more than 8,000 students to their rolls. Enrollment has never fallen at these institutions since *CTG* began in 2000, and the increase in fall 2013 boosted their share of statewide enrollment from 37.0 percent to 37.8 percent.
- Almost 108,000 students who were enrolled in higher education in fall 2013 were also enrolled in high school and taking dual credit classes. This number represented an all-time high and was up by more than 8,000 students from the previous year. Providing qualified high school students with college experiences through dual credit opportunities can help improve those students' preparation for college and increase the likelihood that they will enroll and succeed in postsecondary education after high school graduation.
- To reach enrollment goals, it is important to keep new students enrolled in subsequent semesters. It is encouraging that one- and two-year persistence rates increased or were unchanged for the majority of the most recent cohorts of first-time, full-time students at public universities and community colleges.
    - The one-year statewide persistence rate for the fall 2012 public university cohort was 86.5 percent, the same as the rate for the fall 2011 cohort. Rates improved or stayed the same for white, Hispanic, and Asian cohorts but declined by nearly 0.9 percentage point for African Americans. The one-year statewide persistence rate for the fall 2012 cohort at public community colleges increased by 2 percentage points, to 64.2 percent, compared with the fall 2011 cohort; all four racial/ethnic groups had increases as well.
    - The two-year statewide persistence rate rose from 79.6 percent to 80.0 percent between the fall 2010 and fall 2011 cohorts at public universities. Among racial/ethnic groups, the rate improved for white, Hispanic, and Asian university students. At public

community colleges, two-year rates dropped statewide (49.0 percent to 48.6 percent), as well as for African Americans and Asians. The rate was unchanged at 50.7 percent for Hispanics and improved slightly from 50.3 percent to 50.4 percent for whites.

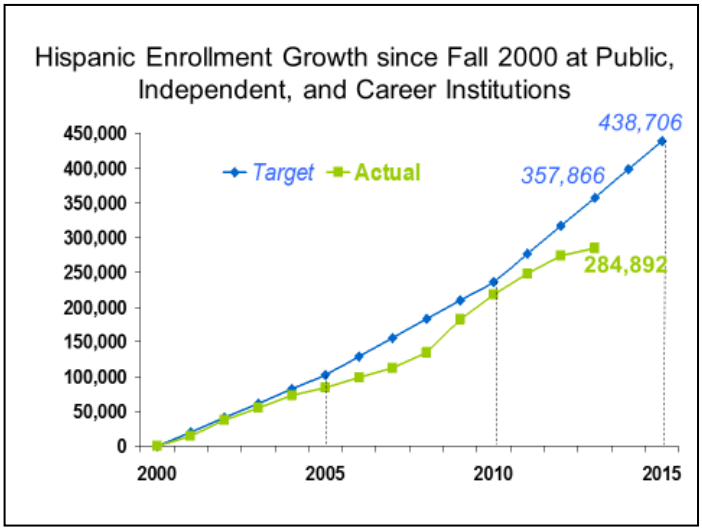
## Hispanic Participation Target: Increase the higher education participation rate for the Hispanic population of Texas from 3.7 percent in 2000 to 4.8 percent by 2010, and to 5.7 percent by 2015.

Note: the 3.7 percent figure for 2000 was based on the projected population data when *CTG* goals were set, before Decennial Census data for 2000 were available; it was revised to 3.6 percent when the data became available.

### Status and Key Findings

Hispanic enrollment is not on track to reach the final target. A total of 526,310 Hispanic students were enrolled in fall 2013, almost 285,000 more students than in fall 2000 and about 11,000 more than in fall 2012, but enrollment has been falling below the target trend line for three straight years.

Figure 4.




- Enrollment needs to grow rapidly to reach the participation rate targets because the Hispanic population is projected to grow by 5.0 percent between 2013 and 2015, a much faster growth rate than that of African-American and white populations (projected to grow by 2.7 percent and 0.7 percent, respectively).
- On the positive side, more Hispanic students are graduating from public high schools and going on to higher education. A total of 139,785 Hispanic students graduated from high school in FY 2013, up from 131,106 in FY 2012 and 74,466 in FY 2002. The rate of graduates going directly into public and independent higher education in Texas improved from 42.6 percent to 51.4 percent between 2002 and 2012 but dropped slightly to 51.1 percent in 2013. However, more than 3,600 more Hispanic graduates went on to Texas higher education in 2013 compared with 2012. College-going rates from high school lagged those of white graduates (56.0 percent) and Asian graduates (79.4 percent).
- Male college-going rates need to improve: only 46.2 percent of Hispanic males who graduated from Texas public high schools in FY 2013 went directly to Texas colleges and universities in the fall, compared with 55.9 percent of Hispanic female graduates.
- Increasing the persistence rates of Hispanic students once they enroll in higher education is a critical component of meeting Hispanic participation targets. Recent trends are encouraging.
    - One-year persistence rates at public universities were unchanged for Hispanics between the fall 2011 and fall 2012 cohorts of first-time, full-time, degree-seeking undergraduates, at 84.9 percent. The one-year persistence rate improved a full percentage point for Hispanics at public community colleges during the same time span, from 63.7 to 64.7 percent.
    - Two-year persistence rates rose for Hispanics at public universities, from 76.8 to 77.9 percent, between the fall 2010 and fall 2011 cohorts. At public community colleges, the two-year persistence rate did not change, staying at 50.7 percent.

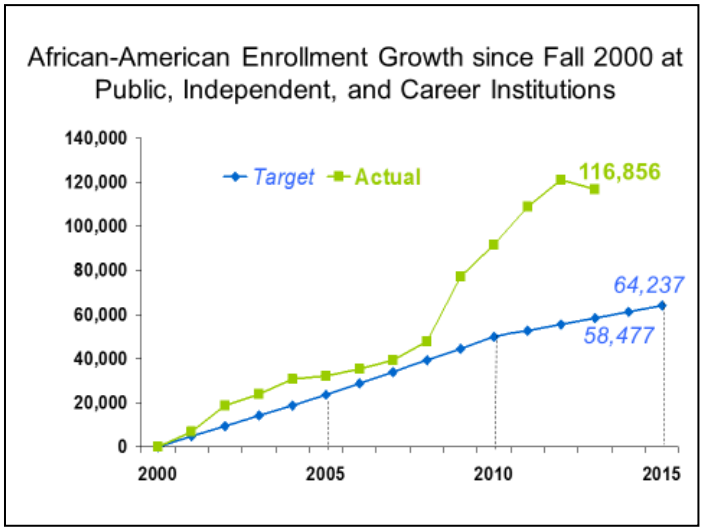
## African-American Participation Target: Increase the higher education participation rate for the African-American population of Texas from 4.6 percent in 2000 to 5.6 percent by 2010, and to 5.7 percent by 2015.

Note: the 4.6 percent figure for 2000 was based on the projected population data when *CTG* goals were set, before Decennial Census data for 2000 were available; it was revised to 4.7 percent when the data became available.

### Status and Key Findings

African Americans reached their final enrollment target in fall 2009, six years early. Enrollment continued to increase through fall 2012 but dropped by about 4,500 students in fall 2013. This population's 7.6 percent participation rate in higher education is 3 percentage points higher than in fall 2000.

Figure 5.




- The participation rate for African-American females grew from 5.6 percent in fall 2000 to 9.7 percent in fall 2012. It fell to 9.3 percent in fall 2013, but this percentage was still, by far, the highest participation rate of the major racial/ethnic and gender groups. African-American males first exceeded the 5.7 percent participation rate target in fall 2011 and have remained above it ever since.
- African Americans have high participation rates in higher education, despite low college-going rates for recent high school graduates. Just 48.7 percent of African-American graduates of public high schools in FY 2013 went directly to Texas higher education in the fall, down from 50.1 percent for FY 2012 and lower than Asian, white, and Hispanic rates.
- African-American persistence rates are generally low relative to other racial/ethnic groups and must be improved so that increased participation rates translate into more graduates. However, most rates have not improved recently.
    - At public universities, the one-year persistence rate for first-time, full-time undergraduate African-American students fell from 79.2 percent for the fall 2011 cohort to 78.3 percent for the fall 2012 cohort; the next lowest rate was 84.9 percent for Hispanic students. The one-year persistence rate at public community colleges increased from 50.6 percent to 51.6 percent, but this rate was well below the Hispanic rate of 64.7 percent.
    - Two-year persistence rates dropped for African Americans at both public universities and community colleges between the fall 2010 and 2011 cohorts. The drops were 0.8 percentage point (to 68.7 percent) at universities and 2.4 percentage points (to 35.4 percent) at community colleges. The Hispanic two-year rate for the fall 2011 cohort was about 9 percentage points higher at universities than the rate for African Americans and approximately 15 points higher at community colleges.

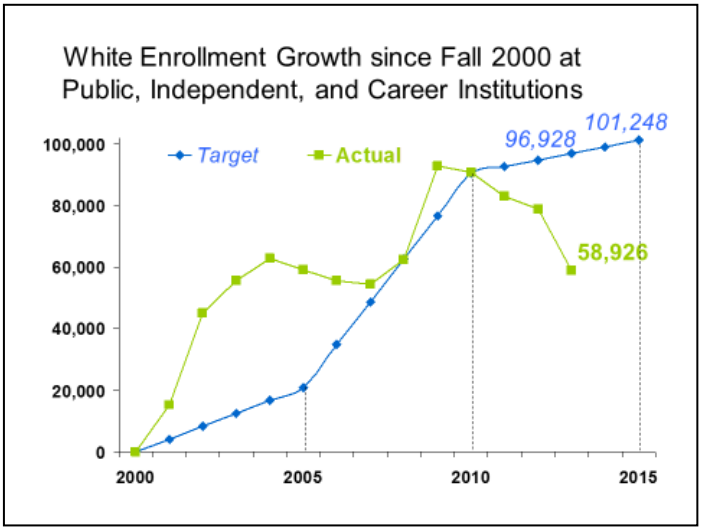
## White Participation Target: Increase the higher education participation rate for the white population of Texas from 5.1 percent in 2000 to 5.7 percent by 2010, and to 5.7 percent by 2015.

Note: the 5.1 percent figure for 2000 was based on the projected population data when *CTG* goals were set, before Decennial Census data for 2000 were available; it was revised to 5.2 percent when the data became available.

### Status and Key Findings

White enrollment fell for the fourth consecutive year in fall 2013. The drop of more than 20,000 students was the largest since *CTG* began in 2000. Enrollment has increased by only 58,926 since fall 2000.

Figure 6.




- The participation rate for white males fell from 5.1 percent to 4.9 percent, just 0.1 percentage point higher than when *CTG* began. White female participation dropped 0.3 percentage point to 6.1 percent.
- Texas public high schools are a declining source of white students for higher education. A total of 104,466 whites graduated from public high schools in FY 2013, about 1,300 fewer than the previous year. In the same interval, college-going rates changed little, increasing from 55.6 percent to 56.0 percent.
- One- and two-year persistence rates increased across the board for first-time, full-time white undergraduates at public universities and community colleges for the fall 2010 and 2011 cohorts. While these rates were nearly all higher than the rates for African-American and Hispanic students, the persistence rates for white students were all substantially below the rates for Asian students.

# *Closing the Gaps* in Success

**Goal: By 2015, award 210,000 undergraduate degrees, certificates, and other identifiable student successes from high-quality programs.**

The success goal was established based on identifiable outcomes of higher education that result in students persisting in their programs and graduating: degrees, certificates, and teacher certifications. Success targets were set for the following categories at public, independent, and career institutions:

- Statewide bachelor's degrees, associate degrees, and certificates (BACs)
- Statewide bachelor's degrees
- Statewide associate degrees
- African-American BACs
- Hispanic BACs
- Statewide doctoral degrees

Targets were set for the following categories at public institutions:

- Science, technology, engineering, and math (STEM) field BACs
- Allied health and nursing BACs

Targets were also set for initial teacher certifications through all routes (traditional, post-baccalaureate, alternative, and other) for the following categories:

- All
- Math and science

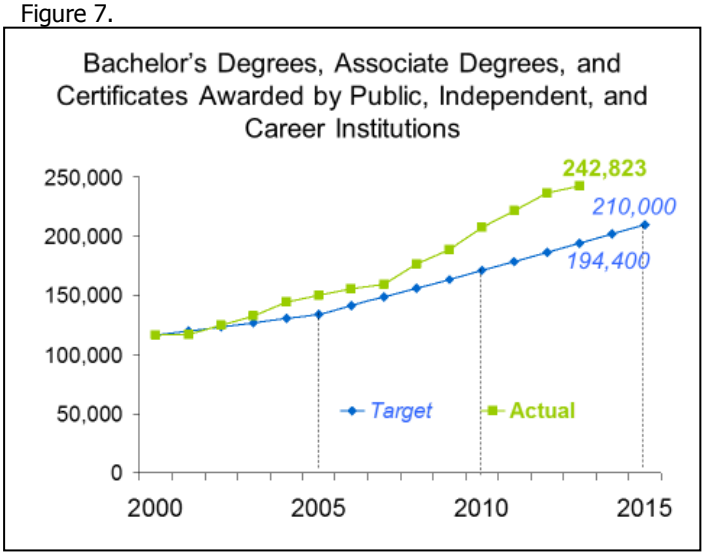
In this year's report, career school awards have been added in to *all* tabulations of awards from FY 2004 through FY 2013, except for awards in STEM fields and allied health and nursing, whose targets have always been restricted to public institutions. Last year, more limited tabulations of career school award data were included (see 2013 *CTG* progress report). Unlike enrollment data, career school awards data are current and do not lag by one year.

**Success Goal: By 2015, award 210,000 undergraduate degrees, certificates and other identifiable student successes from high-quality programs.**

Texas surpassed the goal in FY 2011, when public, independent, and career schools awarded 221,538 bachelor's degrees, associate degrees, and certificates (BACs). The total continued to increase in FY 2012 and 2013, reaching 242,823 awards.

**Success progress charts show the *number* of awards in a fiscal year, in contrast to participation enrollment growth charts that show *changes.***

Figure 7.



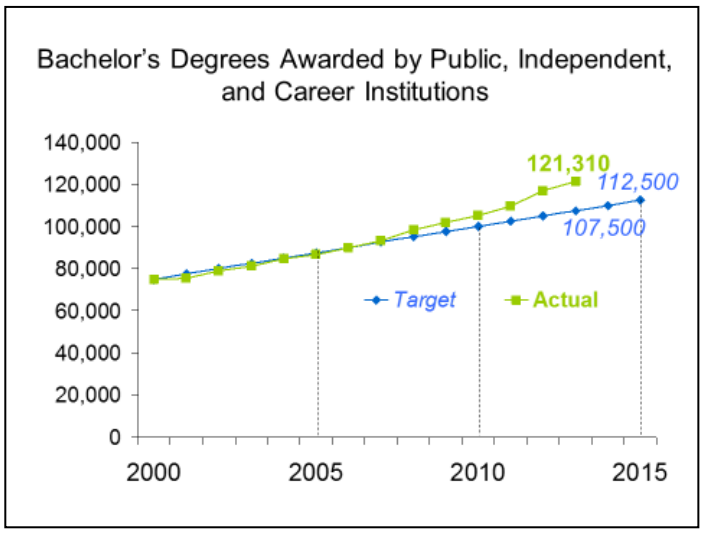

- Bachelor's degrees, associate degrees, and certificates increased by 126,588 or 108.9 percent at public, independent, and career institutions between FY 2000 and FY 2013.
- Improved graduation rates have helped to yield more awards. For example, the six-year graduation rate (baccalaureate or above) of first-time, full-time cohorts of students starting at public universities increased from 49.6 percent for those graduating by FY 2000 to 58.7 percent for students graduating by FY 2012, and to 59.7 percent for six-year graduations by FY 2013.
- Graduation rates at public community, technical, and state colleges have been improving: 32.1 percent of first-time, full-time students entering these institutions in fall 2007 earned a BAC by FY 2013. This was 1 percentage point better than the fall 2006 cohort's 31.1 percent six-year success rate and nearly 3 percentage points better than the fall 2005 cohort's rate.
- Strategies for improving success are especially needed for African-American and Hispanic students, since they persist and graduate at much lower rates than whites and Asians at public institutions. For example, six-year graduation and persistence rates for fall 2007 first-time, full-time public university undergraduates were as follows: 54.2 percent – African American; 65.7 percent – Hispanic; 75.8 percent – white; and 84.2 percent – Asian.
- For first-time, full-time public community, technical, and state college students, the six-year graduation and persistence rates for the fall 2007 cohort were as follows: 29.9 percent – African American; 42.1 percent – Hispanic; 46.3 percent – white; and 55.8 percent – Asian.

## Success Target for Bachelor's Degrees: Increase the number of students completing bachelor's degrees to 100,000 by 2010 and to 112,500 by 2015.

### Status and Key Findings

The state exceeded the target in FY 2012, with public, independent, and career institutions awarding 117,114 bachelor's degrees. The total increased to 121,310 in FY 2013, 46,404 or 61.9 percent more than in FY 2000.

Figure 8.



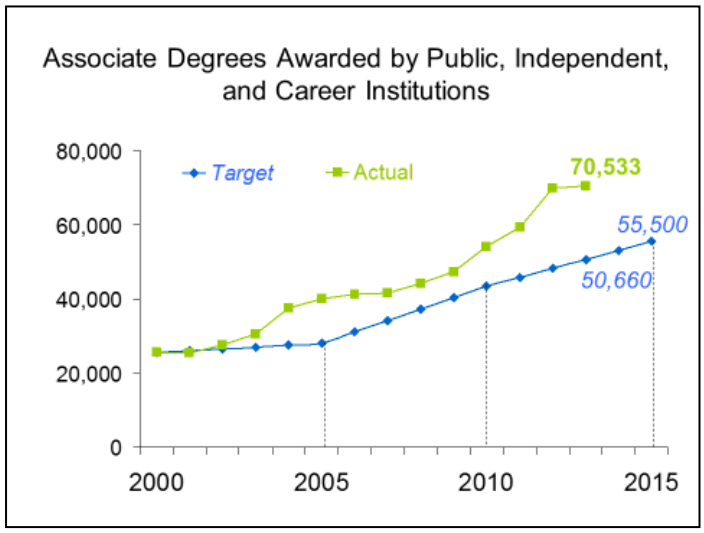

- Public institutions awarded 93,540 bachelor's degrees in FY 2013, more than three-fourths of the statewide total. Independent institutions awarded 19,030 degrees, followed by career schools with 8,740.
- Hispanic students earned 25,171 bachelor's degrees from public institutions in FY 2013, up more than 2,000 (8.7 percent) from FY 2012. This was the highest rate of increase among the three major racial/ethnic groups. Female students earned 61.0 percent of the bachelor's degrees awarded to Hispanic students.
- Public institutions awarded white students 46,999 bachelor's degrees in FY 2013 (57.0 percent to females), a 1,131 (2.5 percent) increase from 2012. Bachelor's awards to African-American students rose by about the same percentage (2.6 percent), from 8,968 to 9,200 (two-thirds to females).

## Success Target for Associate Degrees: Increase the number of students completing associate degrees to 43,400 by 2010, and to 55,500 by 2015.

### Status and Key Findings

Associate degrees rose above the final target in FY 2011, four years early. Public, independent, and career institutions awarded 70,533 associate degrees in FY 2013, 27.1 percent above the 2015 target.

Figure 9.




- Public institutions awarded 61,413 associate degrees in FY 2013, 87.1 percent of the statewide total. Two-year colleges awarded 99.6 percent of the associate degrees conferred by public institutions, with the remainder awarded by universities.
- Career schools accounted for 8,642 associate degrees, down more than 2,000 from FY 2012. Independent institutions awarded the remaining 478 degrees in FY 2013.
- Hispanic students had the largest increase in associate degrees earned at public institutions between FY 2012 and FY 2013. They received 22,163 degrees in FY 2013, up 1,289 (6.2 percent) from FY 2012.
- African-American students were awarded 7,055 associate degrees by public institutions, 366 or 5.5 percent above the FY 2012 level. Awards to white students increased from 24,178 to 25,309.

**Success Target for African Americans: Increase the number of African-American students completing bachelor's degrees, associate degrees, and certificates to 19,800 by 2010 and to 24,300 by 2015.**

## Status and Key Findings

This target was reached in FY 2011, when institutions awarded 25,183 bachelor's degrees, associate degrees, and certificates (BACs) to African-American students. The total of 29,687 awards in FY 2013 was almost 5,400 awards or 22.2 percent more than the final target.

- Undergraduate awards earned by African-American students increased by 18,472 or 164.7 percent since FY 2000.
- Public two-year institutions conferred the most African-American BACs: 11,544, or 38.9 percent of the 2013 total.
- Public four-year institutions awarded the next-most awards (9,220), followed by career schools (6,972) and independent institutions (1,951). Awards dropped at both career schools and independent institutions from 2012 levels.

Figure 10.

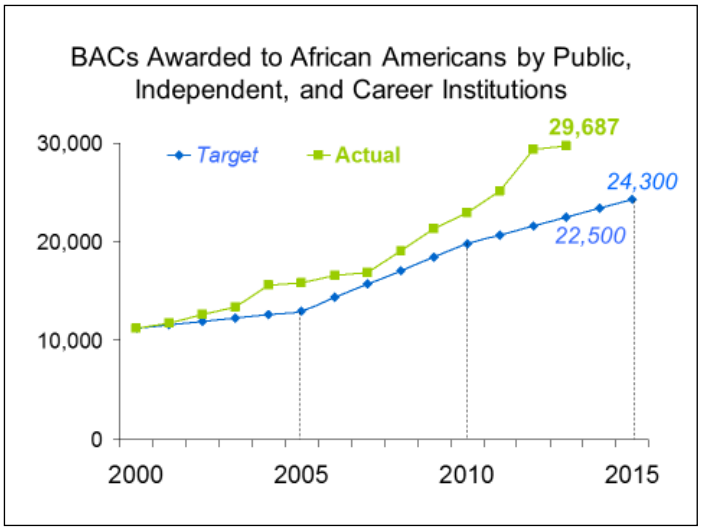
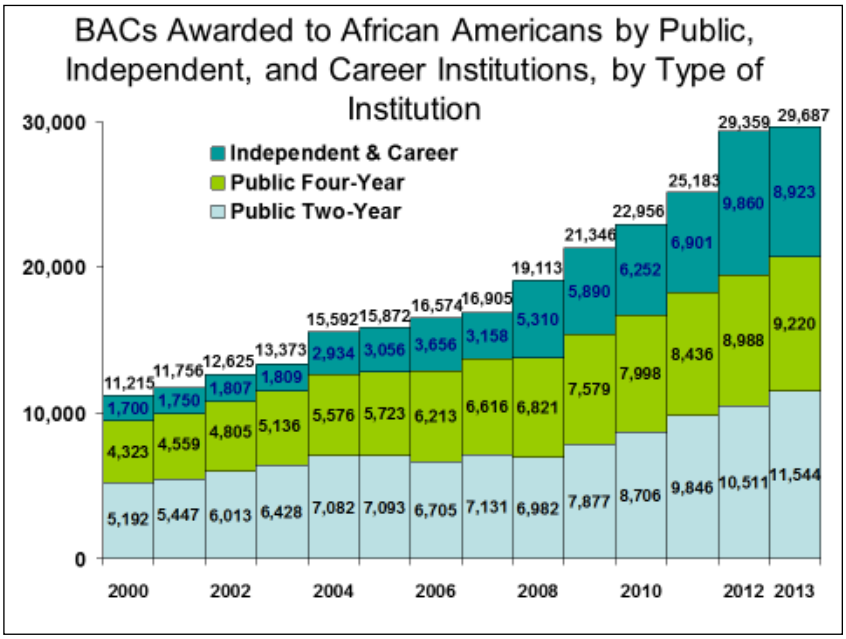



Figure 11.



**Success Target for Hispanics: Increase the number of Hispanic students completing bachelor's degrees, associate degrees, and certificates to 50,000 by 2010 and to 67,000 by 2015.**

## Status and Key Findings

Hispanic students met the target in FY 2012 by earning 73,119 bachelor's degrees, associate degrees, and certificates (BACs). They earned 76,686 awards in FY 2013, more than three times what Hispanic students earned in the first year of *CTG*.

- The number of BACs awarded to Hispanics increased by nearly 5 percent from the previous year.
- Public two-year institutions awarded 34,004 BACs to Hispanic students in FY 2013, about 3,000 more than in FY 2012 and the largest share of Hispanic BACs.
- Public four-year institutions conferred about 2,000 more undergraduate awards to Hispanics in FY 2013 than in the previous year.
- At both career schools and independent institutions, however, the number of awards to Hispanic students fell in 2013.

Figure 12.

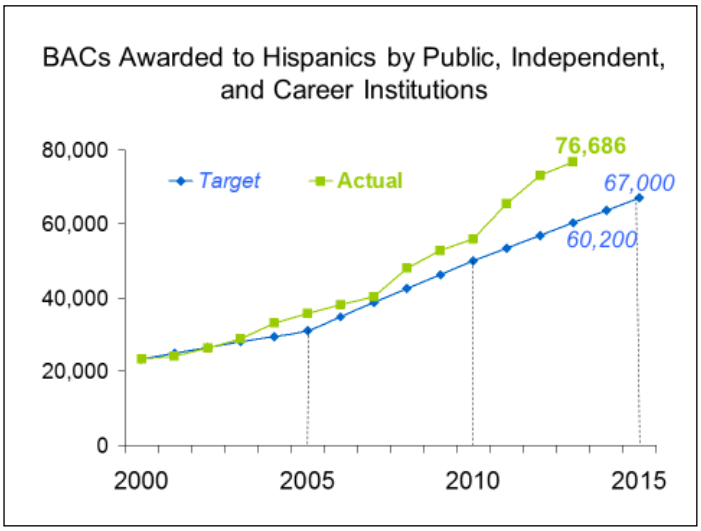
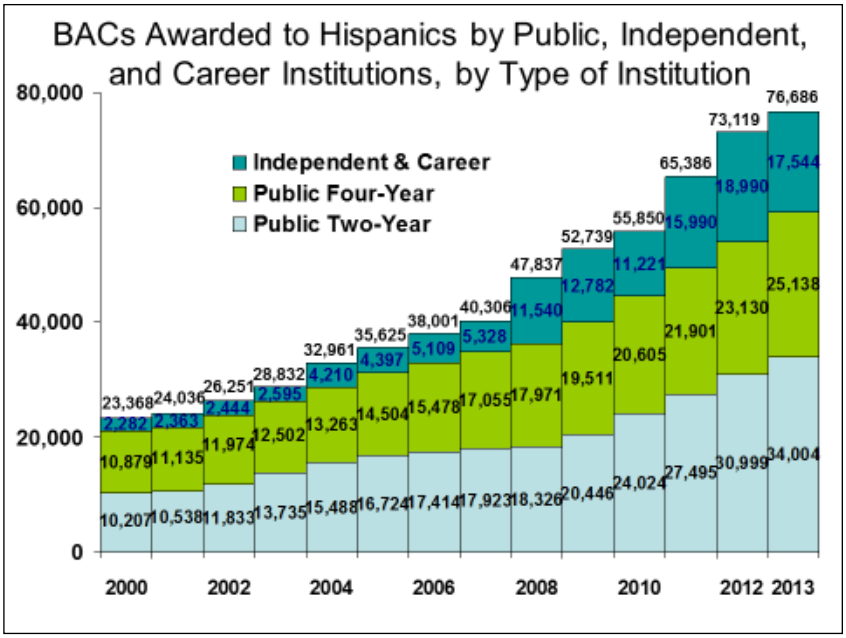



Figure 13.

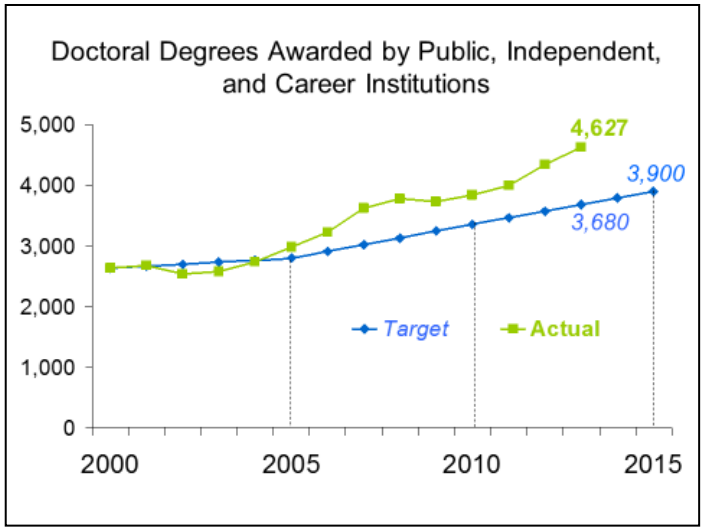


## Success Target for Doctoral Degrees: Increase the number of students completing doctoral degrees to 3,350 by 2010 and to 3,900 by 2015.

### Status and Key Findings

Public, independent, and career institutions surpassed the final target in FY 2011 by awarding 3,995 doctoral degrees. The number increased to 4,627 in FY 2013, 18.6 percent above the final target. This target is for research/scholarship doctorates, such as the Ph.D. and Ed.D.; it excludes professional doctorates, such as the M.D. and J.D.

Figure 14.



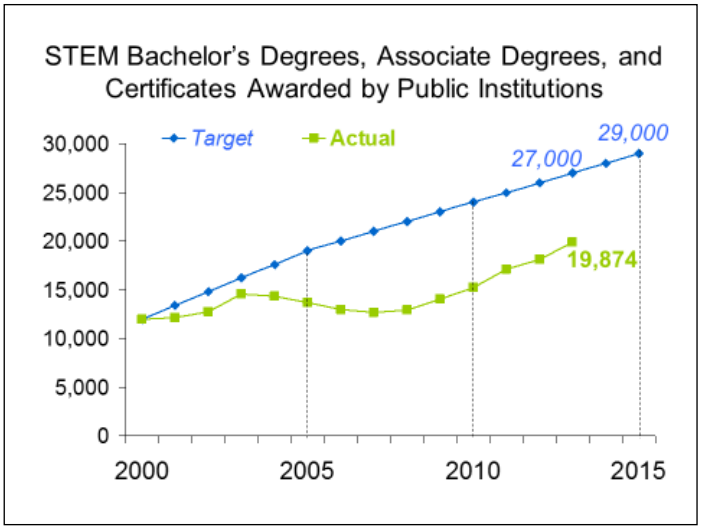

- Public institutions award most doctorates in Texas: 3,914 in FY 2013, about 85 percent of the total. Independent institutions awarded 586 doctorates, 34 more than the previous year. Career schools awarded 127 doctoral degrees, down 27 from FY 2012.
- Hispanic students earned 12.1 percent more doctorates from public institutions in FY 2013 than the previous year, the fastest gain of the three major racial/ethnic groups. This increased their share of total public doctoral degrees from 8.9 percent to 9.2 percent. African-American students had a 5.9 percent share in 2013 (unchanged from 2012), and white students had a 41.6 percent share. International students received 34.8 percent of public doctorates, and the remaining 8.4 percent of public degrees went to "other" students.
- Males continued to earn more doctorates from public institutions than females in FY 2013, 2,050 to 1,864, a gap of 186 graduates. However, this gap was less than the gap observed in FY 2012.

**Success Target for Science-Technology-Engineering-Mathematics (STEM) Fields: Increase the number of students completing engineering, computer science, math, and physical science bachelor's degrees, associate degrees, and certificates from 12,000 in 2000 to 24,000 by 2010, and to 29,000 by 2015.**

**Status and Key Findings**

Public institutions (the only group included in this target) are not on track to meet the final target. Although the number of STEM bachelor's degrees, associate degrees, and certificates (BACs) awarded has been moving closer to the target trend line since FY 2008, the remaining gap – based on 19,874 awards in FY 2013 – is more than 9,000 awards.

Figure 15.

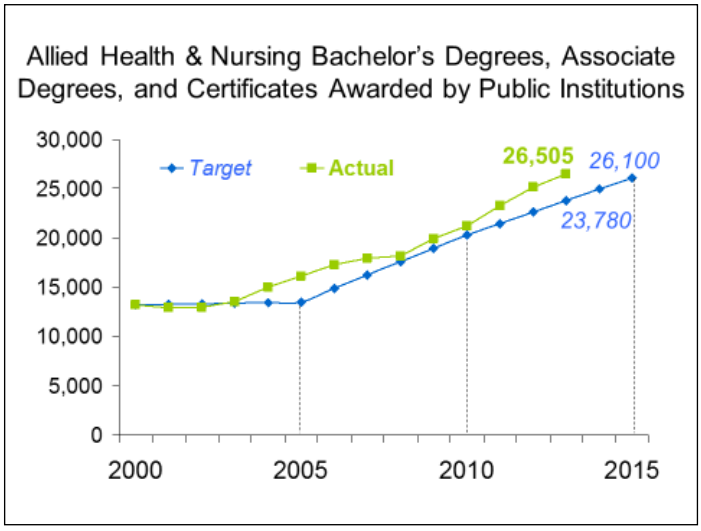



- Undergraduate awards in STEM fields increased by 1,754 from FY 2012 to FY 2013.
- This series has fluctuated substantially during the *CTG* period. The number of awards decreased for four consecutive years after peaking at 14,578 in FY 2003. In the last six years, it has rebounded by 7,208 or about 57 percent.
- In FY 2003, about one in four STEM BACs was awarded to a female student. That situation has worsened: since FY 2008, only about one in five of those awards has gone to a female.
- African-Americans' share of the total STEM awards decreased slightly from FY 2003 to FY 2013, from 9.5 percent to 8.3 percent, even though they earned nearly 20 percent more awards, compared with a 15.5 percent gain for whites.

**From FY 2003 to FY 2013, Hispanic students had, by far, the biggest and fastest growth in STEM awards: an increase of 3,246 (117.4 percent), raising their share of all STEM awards from 19.0 to 30.2 percent.**

**Success Target for Allied Health and Nursing: Increase the number of students completing allied health and nursing bachelor's degrees, associate degrees, and certificates to 20,300 by 2010 and to 26,100 by 2015.**

Figure 16.



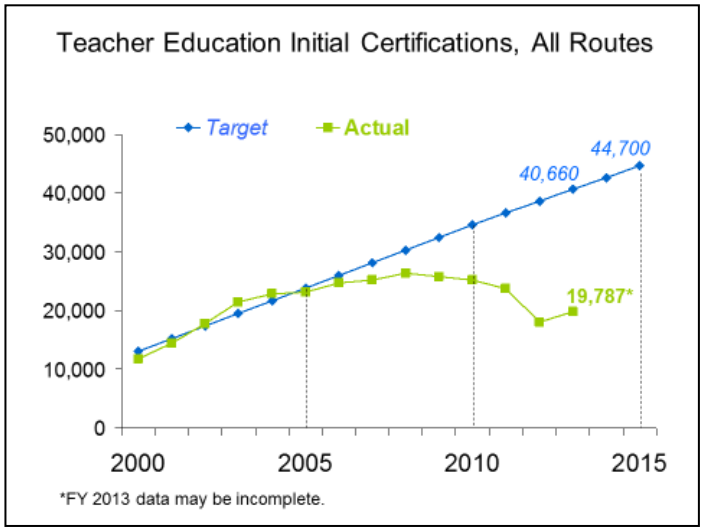

**Status and Key Findings**

Public institutions (the only group included in this target) reached the 2015 *CTG* target for the first time in FY 2013 with 26,505 undergraduate awards. This was 1,344 (5.3 percent) more than in FY 2012 and more than double the FY 2000 total.

- Students earned 16,534 nursing bachelor's degrees, associate degrees, and certificates (BACs) from public institutions in FY 2013, about 800 more than the previous year. Allied health BACs totaled 9,971 in FY 2013, about 500 more than in FY 2012.
- Two-year institutions produce the majority of allied health and nursing graduates; they awarded 63.6 percent of the BACs in these fields in FY 2013. However, this share has trended downward since 2004, when they awarded about three-quarters of these BACs.

**Success Target for Teachers: Increase the number of teachers initially certified through all teacher certification routes to 34,600 by 2010 and to 44,700 by 2015.**

Figure 17.

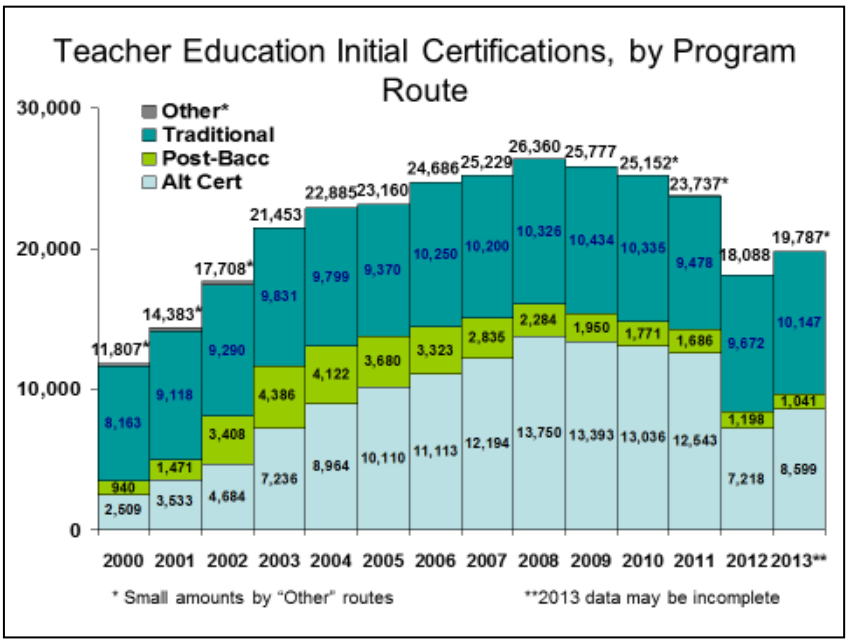



**Status and Key Findings**

After declining for four straight years, the number of initial teacher certifications finally increased in FY 2013, by 1,699. However, the state is not on track to close the remaining gap of nearly 25,000 certifications in the final two years of *CTG*.

- Certifications through alternative programs dropped by more than 5,300 in FY 2012, but in 2013 they rebounded by nearly 1,400. This raised their share of all certifications to 43.5 percent, still well below a nearly 53 percent share just two years prior.
- Traditional certifications as a percent of all certifications have gone down since FY 2000 when they comprised two-thirds of the total. However, certifications through this route have increased in each of the last two years.
- Post-baccalaureate certifications dropped for the 10th year in a row, by 157. Their share of the total has declined from about 20 percent in FY 2003 to about 5 percent in 2013.

Figure 18.

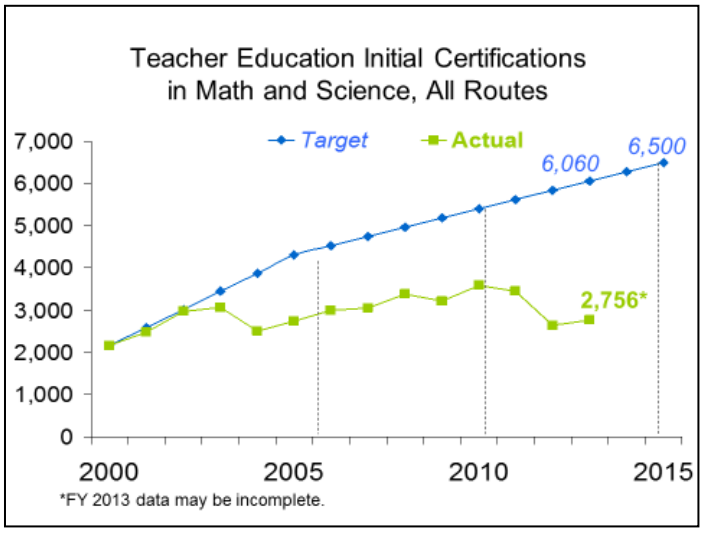


**Success Target for Math and Science Teachers: Increase the number of math and science teachers certified through all teacher certification routes to 6,500 by 2015.**

### Status and Key Findings

Initial teacher certifications in math and science increased by approximately 100 to 2,756 in FY 2013, reversing a two-year decline. It is unlikely that the final target will be reached, since certifications would have to more than double in two years to reach the 2015 target of 6,500 certifications.

Figure 19.




- Certifications have increased by just 600 since FY 2000. They needed to increase by 3,904 during that time to keep pace with the target trend line.
- To put the shortfall in qualified math and science certifications in perspective: 1,103 students altogether graduated from Texas public universities in FY 2013 with a bachelor's degree in math. Texas would need more than two times that number to seek a teaching certification to close this gap. Building a stronger pipeline of math and science teachers is essential if the state wishes to build human resources in STEM areas.

# *Closing the Gaps* in Excellence

**Goal: By 2015, substantially increase the number of nationally recognized programs or services at colleges and universities.**

The quality of an institution's educational units and services contributes to its reputation and fosters national recognition. Consideration of the excellence goal has been increasingly geared toward the need for both individual program excellence and overall institutional quality. Two general targets were set to measure progress in excellence:

- Improved rankings of research institutions, public liberal arts universities, and health science centers
- Identification of at least one nationally recognized program at each public community and technical college and university

**Excellence Target: Increase the number of research institutions ranked in the top 10 among all research institutions from zero to one, and two additional research universities ranked in the top 30 by 2010; increase the number of public research universities ranked in the top 10 among all public research universities from zero to two, and four ranked among the top 30 by 2015.**

**Increase the number of public liberal arts universities ranked in the top 30 among all public liberal arts institutions from zero to two by 2010, and four by 2015.**

**Increase the number of health science centers ranked among the top 10 medical institutions from zero to one by 2010, and two by 2015**.

**Status and Key Findings**

Regarding top-ranked research institutions, public liberal arts universities, and health science centers, Texas has made no appreciable progress, according to two of the major ranking organizations, since the start of *CTG*.

- *U.S. News & World Report* (*U.S. News*) has never ranked the Texas public flagship institutions, The University of Texas at Austin (UT-Austin) and Texas A&M University (TAMU), among the top 10 national public universities during the *CTG* period. The *U.S. News* 2014 edition of "America's Best Colleges" ranked UT-Austin in a tie for 16th place among national public universities, down from a tie for no. 13 the previous three years. Texas A&M University dropped from a tie for no. 23 to a tie for 26th place. Its best ranking since 2000 was a tie for 15th place in the 2002 rankings by *U.S. News*.

**Rankings among National Public Universities by *U.S. News & World Report***

| Institution | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UT-Austin | 13* | 16 | 15* | 14* | 17* | 14* | 17 | 13* | 13* | 15* | 15* | 13* | 13* | 13* | 16* |
| TAMU | 18* | 17 | 15* | 24* | 27* | 22* | 21* | 21* | 23 | 24* | 22* | 22 | 19* | 23* | 26* |

*Tie.

- Rankings of other "first tier" public universities in Texas: The University of Texas at Dallas (tie for no. 73); and Texas Tech University (tie for no. 88).
- "First tier" status simply means that *U.S. News* ranked an institution in the top 75 percent of the 270 national public and independent universities the publication ranks.
- Among public "research medical schools," the 2014 *U.S. News* rankings placed The University of Texas Southwestern Medical Center (UT Southwestern) in a tie for 8th place; it was tied for 7th place in 2013. The next highest-ranked Texas school in 2014 was The University of Texas Health Science Center-Houston (UTHSC-Houston), tied for 27th place, down from a tie for 25th place in 2013.
- No public institution in Texas was among the *U.S. News* 240 "Best National Liberal Arts Colleges" in 2014. In fact, only 20 public institutions nationwide made this list. Few public schools meet the *U.S. News* definition of a liberal arts college: emphasis on undergraduate education with at least half of all degrees awarded in the arts and sciences. Midwestern State University is the only officially designated public liberal arts university in Texas.

- Using a different measurement methodology than *U.S. News*, the Center for Measuring University Performance (CMUP) has placed The University of Texas at Austin in a tie for no. 10 or better five times since 2000, most recently in 2007, based on data from its annual report, "The Top American Research Universities." The Center does not provide ranking numbers, but ranks can be assigned using their data.

**Rankings among American Public Research Universities**
**Based on Data from the Center for Measuring University Performance****

| Institution | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| UT-Austin | 11* | 12 | 10* | 10* | 6* | 6* | 12* | 8* | 14* | 13* | 14* | 12* | 13* |
| TAMU | 11* | 17 | 18* | 21* | 23 | 21 | 20 | 14* | 14* | 13* | 17* | 16 | 17* |

*Tie. **The Center does not compute ranking numbers, but they can be assigned using the Center's data.

- Beginning with their 2010 report, the CMUP provided additional tables for top "medical research universities." These institutions, such as UT Southwestern and The University of Texas M.D. Anderson Cancer Center (UT M.D. Anderson), were previously included with the research universities. The best that Texas' medical and specialized research universities did from 2000 to 2009, when included with public research universities, was a tie for 18th place in 2006 by UT Southwestern. While roughly half of the research universities in the CMUP data have medical schools, they are not necessarily comparable with medical and specialized research universities. In the tables for 2012, based on data from the CMUP, UT Southwestern was 2nd among public medical and specialized research universities, UT M.D. Anderson was in 3rd place, and UTHSC-Houston was tied for 7th place. Those rankings were unchanged from the 2011 report. While the results reflect the excellence of these institutions, a "top 10" ranking meant little because there were only eight institutions on the list.
- By itself, a ranking does not provide any guidance for specific action to improve an institution. However, examination of the components that go into rankings can yield insight into areas where an institution is doing well relative to its peers and where it needs improvement.

**Excellence Target: Each college and university will have identified by 2002 at least one program to achieve nationally recognized excellence.**

**Community and technical colleges and universities will have at least one program or service nationally recognized: 75 percent of the institutions by 2010, and 100 percent by 2015.**

**Status and Key Findings**

Past *CTG* progress reports noted that all Texas public higher education institutions had identified at least one program to develop for national recognition, and that all received national recognition of some type in one or more programs. Therefore, the state's colleges and universities are on target to meet these excellence targets.

- Public institutions identified excellent programs in the Texas Higher Education Accountability System's December 2013 edition. Highlights include the following:
  - At Lamar University, the doctoral program in deaf studies and deaf education provides cutting-edge education and training in deafness research and practice. The program has earned national prominence in the preparation of leaders in the field of deaf studies and deaf education, teachers of deaf children and youth, and American Sign Language teachers.
  - The dental laboratory technology program at Texas State Technical College-Harlingen is one of only two in the state of Texas. Students learn to work with a variety of materials to produce dentures, crowns, orthodontic appliances, and other dental products. Graduates of the program are employed throughout the state.
  - South Texas College's (STC) Dual Enrollment Medical Science Academy has been providing high school juniors in Hidalgo and Starr Counties with the opportunity to earn an Associate of Science degree in biology before their senior year in high school. Monday through Friday, in the afternoons, students are full-time college students at one of the STC campuses where they are enrolled in cohorts of 20-25 students. As of August 2013, 289 students have graduated with Associate of Science degrees in biology through the Academy.
  - UT Southwestern has begun a major effort in traumatic brain injury research, prevention, and treatment to improve the lives of thousands of affected veterans, accident victims, and athletes across Texas. Recent accomplishments include the discovery of drug-like compounds that accelerate recovery after brain injury in animal models. A neuromodels core lab has been started to support multidisciplinary research on disorders associated with traumatic brain injury.

# *Closing the Gaps* in Research

**Goal: By 2015, increase the level of federal science and engineering research and development obligations to Texas institutions to 6.5 percent of obligations to higher education institutions across the nation.**

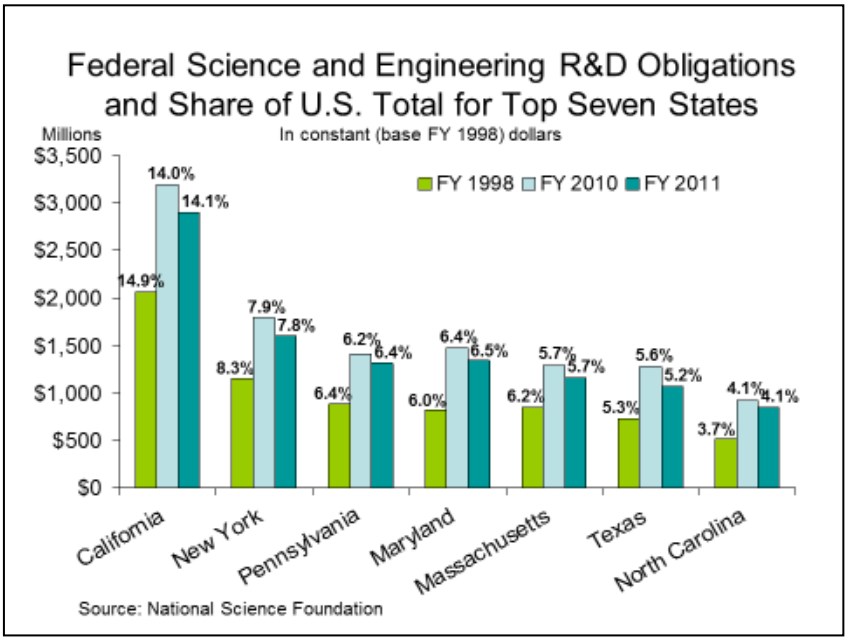
Capturing a significant portion of the federal science and engineering research and development obligations, and of government, private, and institutional funds for R&D expenditures, must remain a primary focus of the Texas higher education agenda. The *CTG* research goal serves to keep attention on the need for Texas to compete with other states for national research dollars and projects. The research goal has targets in the following areas:

- Federal science and engineering R&D obligations to public and independent institutions
- R&D expenditures at public universities and health-related institutions from federal and state government, private sources, and institutional funding

**Research Goal: By 2015, increase the level of federal science and engineering research and development obligations to Texas institutions to 6.5 percent of obligations to higher education institutions across the nation. Increase to 6.2 percent by 2010.**

The state is farther from achieving the final goal than when *CTG* began. Federal obligations to Texas public and independent institutions fell to 5.2 percent of the national total in FY 2011, the most recent year of available data. That was the lowest percentage for Texas from FY 1998 through FY 2011.

Figure 20.



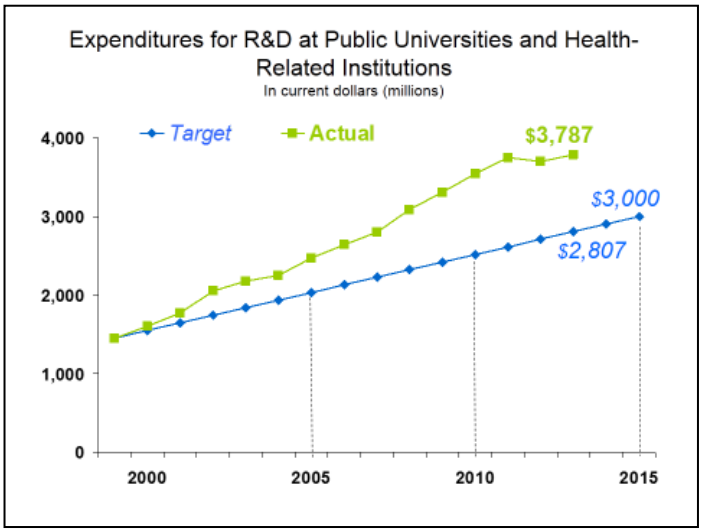

- Federal science and engineering obligations for R&D received by Texas public and independent higher education institutions totaled $1.45 billion in FY 2011, down $156.7 million or 15.3 percent from FY 2010. While obligations fell in all the other top seven states as well, New York was the only state besides Texas that also saw its share of national obligations drop.
- On a constant dollar basis (FY 1998 base), Texas obligations were $1.07 billion in FY 2011, compared with $0.73 billion in FY 1998.

**Research Target: Increase research expenditures by Texas public universities and health-related institutions from $1.45 billion in FY 1999 to $3 billion by 2015 (approximately a 5 percent increase per year).**

**Status and Key Findings**

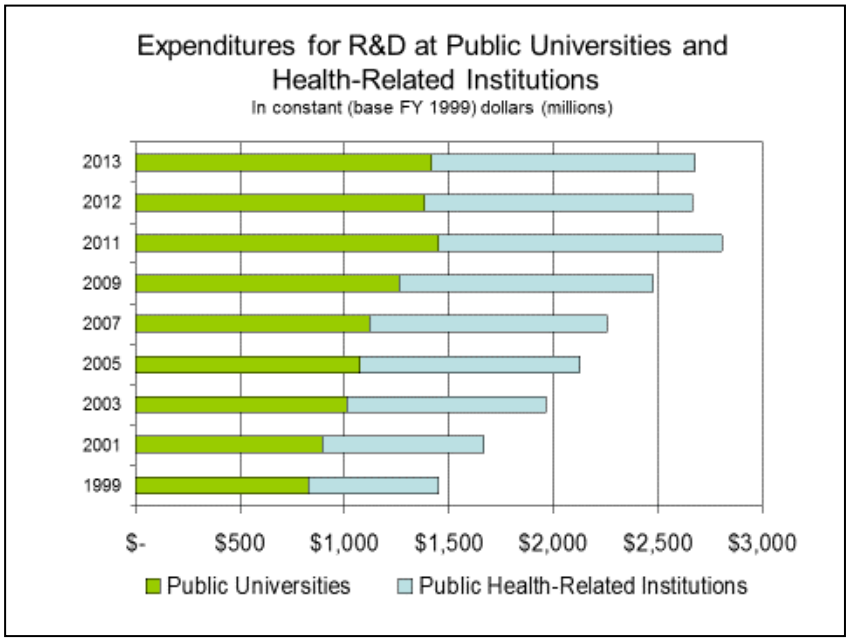
Texas institutions exceeded the target in FY 2008 and continued to increase research expenditures every year until a 1.3 percent drop in FY 2012. Expenditures rebounded in FY 2013 by about $90 million, or 2.4 percent, to $3.79 billion. In constant (FY 1999 base) dollars, expenditures increased by 0.4 percent in FY 2013, following a 5.0 percent drop the previous year.

Figure 21.




- From FY 2012 to FY 2013, current-dollar expenditures increased a little faster at public health-related institutions (4.6 percent) than at public universities (4.3 percent).
- The federal government was the largest provider of funds for public R&D expenditures in FY 2013, with a 46.8 percent share. State government provided the next largest share (20.6 percent) in appropriations, contracts, and grants, followed by private sources (18.7 percent) and institutional funding (13.9 percent).
- Research expenditures in FY 2013 were 160.9 percent more than in FY 1999 (actual dollar basis). The increase was 84.4 percent in constant dollars (adjusted back to base year FY 1999).

Figure 22.



# Higher Education Assistance for Identified High Schools

Working with public high schools that have substantially lower college-going rates than average is a state priority. Often these schools enroll large numbers of economically disadvantaged, underrepresented students, many of whom have parents who did not go to college. These students and their parents may be unfamiliar with college requirements both in terms of the academic preparation needed to support college success and the financial and administrative considerations affiliated with application and enrollment.

House Bill (H.B.) 2550, passed by the 83rd Texas Legislature, Regular Session, now codified as Texas Education Code (TEC) §58.810, consolidated two existing programs geared toward high schools with low college-going rates: the Higher Education Enrollment Assistance Program (TEC §61.088) and the Higher Education Assistance Plan (TEC §61.07622). The purpose is to encourage higher education institutions to collaborate with identified schools to increase student success, with emphasis on Hispanic and African-American males, two groups that have traditionally had lower college enrollment and persistence rates. Providing access to high-quality dual credit opportunities is also prioritized. The statute directs institutions to report their efforts to the THECB, which is charged with developing the list of high schools that have substantially lower-than-average college-going rates and with summarizing the elements and results of institutional plans in the annual progress report. This information is presented below.

**Elements of Plans**

The THECB surveyed institutions about the activities included in their higher education assistance plans using an instrument developed in meetings with THECB staff and institutional representatives from public universities and community, technical, and state colleges (CTCs). The survey was announced in a memorandum dated January 22, 2014, to multiple stakeholders at each public higher education institution in the state. A webinar was held on February 5, 2014, to describe the survey and answer questions about the THECB's responsibilities under the statute.

The survey, which was administered from late March to early May, 2014, directed institutions to report their collaborations with THECB-identified high schools that had low college-going rates. The criteria for inclusion were that a high school be in the lowest 10 percent of college-going rates for all public high schools in two or more consecutive years between FY 2008 and FY 2012, with an average of 26 or more graduates per year. A total of 141 high schools met these criteria. Some institutions had previously collaborated with schools on the list, because the new criteria were aligned with criteria that were used under previous assistance plan legislation (often referred to as H.B. 400 schools). The methodology for determining H.B. 2550 schools will be reviewed next year, with input from institutions of higher education.

A total of 81 higher education institutions responded to the survey. Of those, 49 respondents (29 two-year institutions and 20 universities) reported collaborating with high schools during the survey reference period: the fall 2012 semester through the fall 2013 semester. They collaborated with 117 high schools, of which 112 were in the identified list: a 79 percent coverage rate of the 141 schools. One institution reported collaborating with 41 high schools, and THECB staff verified this information in a follow-up call to the institution. Excluding that

institution, there were collaborations reported with 109 high schools, 104 of which were on the identified list, so collaboration was not concentrated in only a handful of institutions.

Of the 117 high schools with collaborating higher education institutions, 62 had collaborations with two or more higher education institutions. At most, seven postsecondary institutions partnered with one high school; this occurred at just one high school. Two high schools had six partner institutions.

The table below shows the number of institutions (of the 49 respondents) that reported each activity for providing information and assistance to high school students, as provided in the H.B. 2550 survey checklist. The most common activities were distribution of admissions and financial aid materials at high schools (reported by 90 percent of institutions), outreach to bring high school students to tour campus (86 percent), college fairs (82 percent), and outreach to bring high school students to campus events (80 percent). Activities reported in the "other" category by seven institutions were: dual credit orientation for high school students; parent orientations; a truancy counseling program; recruiting events targeted at economically disadvantaged students; a luncheon for junior honor students; parental engagement; use of College Go Center mentors; provision of applicant status reports; and lunch visits to high schools.

**Activities to Provide Information and Assistance to High School Students Reported on Survey of Higher Education Assistance Plans (H.B. 2550)**

| Activity | Institutions Reporting Activity | |
|---|---|---|
| | Number | % of Total |
| Bridge programs or other academic college-readiness activities | 7 | 14% |
| College admission/recruitment/advising staff placed on high school campus | 23 | 47% |
| College fairs | 40 | 82% |
| Content-specific professional development for high school faculty | 4 | 8% |
| Distribution of admissions and financial aid materials at high school | 44 | 90% |
| Dual credit partnerships | 23 | 47% |
| FAFSA assistance sessions | 34 | 69% |
| First-year support/success programs | 12 | 24% |
| Grants/scholarships targeted to students in high school | 26 | 53% |
| High school and college faculty collaborations | 14 | 29% |
| Mentoring/tutoring | 12 | 24% |
| Outreach to bring high school students to campus events | 39 | 80% |
| Outreach to bring high school students to tour campus | 42 | 86% |
| Test preparation for SAT/ACT | 5 | 10% |
| Test preparation for TSI assessment (excluding pre-assessment activities) | 11 | 22% |
| Training for high school counselors | 29 | 59% |
| Work-study students contacting freshmen during the 1st semester in higher ed | 4 | 8% |
| Other | 7 | 14% |

Note: Forty-nine institutions reported one or more activities.

The survey results show 23 institutions placed admission/recruitment/advising staff on the high school campuses. Further investigation into how this activity compares to the Advise Texas model that places students from five Texas universities (including three public universities) on high school campuses might be fruitful.

The survey results show less emphasis on curricular alignment than outreach activities such as college fairs and campus tours. Curricular alignment activities reported included bridge programs or other academic college readiness activities, content-specific professional development for high school faculty, and high school and college faculty collaborations. Four institutions reported providing professional development for faculty at identified schools, and 14 indicated high school and college faculty collaborations were included in their plans. Training for high school counselors was more commonly reported. Both curriculum alignment and counseling will become increasingly important as new high school graduation plans become part of the landscape that students must navigate as they make choices about preparing for and transitioning to college.

**Results of Plans**

This section presents several measures of student success that could be influenced by H.B. 2550 activities. No additional reporting was needed from institutions to derive these measures because the institutions regularly submit relevant data as part of their required Coordinating Board Management (CBM) reporting process. These results provide information on the current college-going rates and activities at THECB-identified high schools with the lowest college-going rates and will serve as a baseline for future analyses of the impact of Higher Education Assistance Plans under H.B. 2550, including whether efforts are proving successful over time. Promising practices for future collaborations may be gleaned from survey and data results.

The table below shows college-going rates for FY 2013 graduates of identified schools: the rate at which students went directly into public and independent higher education in fall 2013. Of 10,735 graduates with valid IDs that could be tracked into higher education, only 21.5 percent enrolled in higher education in the fall. That was more than 30 percentage points lower than the statewide rate for all public high schools of 53.7 percent. A total of 990 graduates of the identified schools did not have valid IDs and could not be tracked after graduation.

**College-going Rates for FY 2013 Texas Public High School Graduates**

| Race/ Ethnicity | Gender | High Schools with Lowest College-Going Rates | | | All High Schools | | |
|---|---|---|---|---|---|---|---|
| | | Number of Graduates | Enrolled Directly in TX Higher Education | | Number of Graduates | Enrolled Directly in TX Higher Education | |
| | | | Number | Percent | | Number | Percent |
| African American | Female | 881 | 226 | 25.7% | 19,272 | 10,353 | 53.7% |
| | Male | 839 | 174 | 20.7% | 18,764 | 8,187 | 43.6% |
| Hispanic | Female | 2,820 | 610 | 21.6% | 64,016 | 35,799 | 55.9% |
| | Male | 2,607 | 413 | 15.8% | 62,802 | 29,042 | 46.2% |
| White | Female | 1,569 | 476 | 30.3% | 50,720 | 30,683 | 60.5% |
| | Male | 1,742 | 336 | 19.3% | 52,240 | 26,946 | 51.6% |
| Other | Female | 141 | 41 | 29.1% | 8,668 | 6,195 | 71.5% |
| | Male | 136 | 28 | 20.6% | 8,864 | 5,988 | 67.6% |
| Total | Both | 10,735 | 2,304 | 21.5% | 285,346 | 153,193 | 53.7% |

Note: Only students with valid IDs were tracked.

As with the statewide population of public high school graduates, females at identified schools are more likely to enroll in college than males. Gaining a better understanding of why enrollment-rate gender gaps are broadening may help to shape interventions for male students moving forward.

The table below shows enrollment rates for 2011-12 graduates from identified public schools and for graduates statewide. These data are useful for comparison purposes. Examining earlier data also provides an opportunity to follow enrolled students into higher education to see if their persistence rates are comparable to statewide results. The data show that college enrollment rates of graduates from identified schools dropped 1.1 percentage points from the FY 2012 to the FY 2013 cohort – from 22.6 percent to 21.5 percent. College enrollment rates dropped statewide, but less so, from 53.9 to 53.7 percent.

One-year persistence rates in the table below show that in addition to much lower college-enrollment rates, graduates from the identified schools were also less likely to persist in college. Approximately 50 percent were still found in college the following year as compared to 75 percent of the statewide public high school population. This finding raises important questions about student preparedness for the rigors of college. Additional focus on curricular alignment, an area with less activity reported in the survey, may help enhance persistence and, ultimately, success. Financial issues that impact persistence should also be examined.

**College-going Rates and One-year Persistence Rates (Fall-to-fall) in Texas Higher Education for FY 2012 Public High School Graduates**

| | | High Schools with Lowest College-Going Rates | | | | All High Schools | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Enrolled Directly in TX Higher Education | | | | Enrolled Directly in TX Higher Education | | |
| Race/ Ethnicity | Gender | Number of Graduates | Number | Percent | Percent Persisted | Number of Graduates | Number | Percent | Percent Persisted |
| African American | Female | 917 | 265 | 28.9% | 42.6% | 18,887 | 10,496 | 55.6% | 70.7% |
| | Male | 894 | 193 | 21.6% | 42.0% | 18,512 | 8,240 | 44.5% | 64.1% |
| Hispanic | Female | 2,785 | 664 | 23.8% | 53.0% | 60,630 | 33,948 | 56.0% | 74.1% |
| | Male | 2,597 | 449 | 17.3% | 45.4% | 58,510 | 27,504 | 47.0% | 68.1% |
| White | Female | 1,839 | 529 | 28.8% | 59.5% | 51,273 | 30,932 | 60.3% | 82.0% |
| | Male | 1,869 | 364 | 19.5% | 48.4% | 53,038 | 27,062 | 51.0% | 77.1% |
| Other | Female | 174 | 36 | 20.7% | 41.7% | 8,188 | 5,724 | 69.9% | 87.7% |
| | Male | 153 | 39 | 25.5% | 56.4% | 8,455 | 5,553 | 65.7% | 84.9% |
| Total | Both | 11,228 | 2,539 | 22.6% | 50.4% | 277,493 | 149,459 | 53.9% | 75.3% |

Note: Only students with valid IDs were tracked.

Dual credit participation has grown exponentially in Texas since 1999 when records were first collected for this population. Forty-seven percent of the postsecondary institutions that reported collaborations with identified schools were partnering to offer dual credit. Relatively few graduates, however, took advantage of dual credit opportunities at those schools – 5.6 percent of 2013 graduates vs. 16.6 percent of 2013 graduates statewide. As shown in the following table, those who did participate in dual credit were much more likely to enroll in college after

graduation with a 60.4 percent enrollment rate for dual credit participants versus a 21.5 percent overall enrollment rate for identified schools. Although students must qualify to take academic dual credit courses and students who intend to go to college are probably more likely to seek out dual credit opportunities, institutions that partner with identified schools should work to ensure all students who are eligible have the opportunity to experience college courses. Identified schools should also explore opportunities for technical dual credit, an area where interest is expanding, in part because of recent legislation that encourages these types of opportunities for high school students.

Partner institutions should continue developing high-quality academic and workforce dual credit college courses to reach as many eligible students as possible. Dual credit can offer a range of postsecondary pathways to help prepare students, including those students at schools with traditionally low higher education participation rates.

**College-going Rates for FY 2013 Public High School Graduates Who Were Enrolled in Dual Credit Their Senior Year**

| Race/ Ethnicity | Gender | High Schools with Lowest College-Going Rates | | | All High Schools | | |
|---|---|---|---|---|---|---|---|
| | | Number of Dual Credit Graduates | Enrolled Directly in Higher Education | | Number of Dual Credit Graduates | Enrolled Directly in Higher Education | |
| | | | Number | Percent | | Number | Percent |
| African American | Female | 22 | 14 | 63.6% | 2,129 | 1,593 | 74.8% |
| | Male | 14 | 6 | 42.9% | 1,146 | 750 | 65.4% |
| Hispanic | Female | 147 | 68 | 46.3% | 11,217 | 8,998 | 80.2% |
| | Male | 97 | 53 | 54.6% | 7,891 | 5,841 | 74.0% |
| White | Female | 186 | 133 | 71.5% | 12,959 | 10,329 | 79.7% |
| | Male | 121 | 79 | 65.3% | 9,404 | 7,126 | 75.8% |
| Other | Female | 8 | 5 | 62.5% | 1,549 | 1,324 | 85.5% |
| | Male | 9 | 7 | 77.8% | 1,131 | 937 | 82.8% |
| Total | Both | 604 | 365 | 60.4% | 47,426 | 36,898 | 77.8% |

Note: Only students with valid IDs were tracked.

Data showing Free Application for Federal Student Aid (FAFSA) submission rates for identified schools, as compared to statewide results, are shown in the table below. With 69 percent of institutions reporting on the survey that they assist students with financial aid and other application materials at identified schools, it is clearly a priority to reach students regarding the completion of this critical paperwork. As the chart shows, 30.1 percent of students who were seniors in 2012-13 at identified schools submitted FAFSA paperwork between January and June of their senior year, considerably lower than the 48.7 percent seen in the statewide population of public high school seniors for the same period. The rate of FAFSA completion has improved at the identified high schools, suggesting efforts are paying off, even though FAFSA submission rates lag behind the state rate.

## FAFSA Completion by Texas Public High School Seniors

| Senior Year | High Schools with Lowest College-Going Rates | | | All High Schools | | |
|---|---|---|---|---|---|---|
| | Number of Seniors | Submitted FAFSA January-June of Senior Year | | Number of Seniors | Submitted FAFSA January-June of Senior Year | |
| | | Number | Percent | | Number | Percent |
| 2010-11 | 8,937 | 2,511 | 28.1% | 298,128 | 144,604 | 48.5% |
| 2011-12 | 8,300 | 2,486 | 30.0% | 298,379 | 146,860 | 49.2% |
| 2012-13 | 8,126 | 2,445 | 30.1% | 305,237 | 148,653 | 48.7% |

Note: Only students with valid IDs were tracked.

# Appendix A: Participation Data

## Appendix Table A-1: Enrollment at Public, Independent, and Career Higher Education Institutions, Fall 2000-2013, and *CTG* Targets

| Race/Ethnicity and Type of Institution | Fall Enrollment | | | | | | | | | | | | | | *CTG* Target | Actual Change 2000 to 2013 | | Change Needed 2013 to 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2015 | Number | Percent | |
| **Total** | 1,038,765 | 1,087,878 | 1,159,686 | 1,192,841 | 1,230,808 | 1,242,656 | 1,261,367 | 1,285,908 | 1,333,805 | 1,462,578 | 1,549,554 | 1,599,603 | 1,628,589 | 1,614,646 | 1,650,000 | 575,881 | 55.4% | 2.2% |
| **Public Two-Year** | 467,041 | 496,083 | 537,880 | 553,896 | 580,006 | 589,306 | 600,598 | 617,176 | 651,342 | 733,956 | 786,235 | 798,892 | 775,461 | 763,190 | 867,670 | 296,149 | 63.4% | 13.7% |
| **Public Four-Year** | 427,438 | 444,140 | 469,815 | 487,324 | 497,507 | 500,811 | 507,556 | 514,923 | 527,732 | 551,346 | 578,917 | 593,161 | 601,886 | 610,248 | 623,329 | 182,810 | 42.8% | 2.1% |
| **Independent & Career** | 144,286 | 147,655 | 151,991 | 151,621 | 153,295 | 152,539 | 153,213 | 153,809 | 154,731 | 177,276 | 184,402 | 207,550 | 251,242 | 241,208 | 159,001 | 96,922 | 67.2% | -34.1% |
| **African American** | 112,839 | 119,587 | 131,539 | 136,848 | 143,614 | 145,067 | 148,337 | 152,290 | 160,696 | 190,173 | 204,790 | 221,767 | 234,161 | 229,695 | 172,700 | 116,856 | 103.6% | -24.8% |
| **Public Two-Year** | 53,749 | 57,309 | 62,986 | 64,762 | 68,631 | 69,914 | 71,646 | 74,325 | 80,434 | 98,890 | 108,954 | 119,372 | 115,366 | 113,582 | 87,714 | 59,833 | 111.3% | -22.8% |
| **Public Four-Year** | 41,412 | 44,251 | 49,038 | 51,862 | 54,595 | 55,483 | 56,891 | 58,125 | 60,436 | 65,125 | 68,705 | 71,279 | 72,632 | 72,198 | 64,822 | 30,786 | 74.3% | -10.2% |
| **Independent & Career** | 17,678 | 18,027 | 19,515 | 20,224 | 20,388 | 19,670 | 19,800 | 19,840 | 19,826 | 26,158 | 27,131 | 31,116 | 46,163 | 43,915 | 20,164 | 26,237 | 148.4% | -54.1% |
| **Hispanic** | 241,418 | 256,393 | 278,601 | 296,160 | 314,723 | 325,403 | 340,592 | 353,948 | 376,490 | 423,652 | 459,180 | 489,683 | 515,373 | 526,310 | 676,100 | 284,892 | 118.0% | 28.5% |
| **Public Two-Year** | 133,287 | 142,239 | 156,716 | 167,040 | 180,062 | 186,185 | 196,038 | 204,398 | 219,931 | 249,196 | 272,898 | 288,722 | 289,665 | 291,798 | 429,947 | 158,511 | 118.9% | 47.3% |
| **Public Four-Year** | 82,860 | 87,971 | 95,070 | 101,655 | 107,052 | 111,227 | 116,016 | 120,304 | 126,573 | 136,476 | 148,303 | 159,316 | 167,913 | 177,404 | 212,813 | 94,544 | 114.1% | 20.0% |
| **Independent & Career** | 25,271 | 26,183 | 26,815 | 27,465 | 27,609 | 27,991 | 28,538 | 29,246 | 29,986 | 37,980 | 37,979 | 41,645 | 57,795 | 57,108 | 33,340 | 31,837 | 126.0% | -41.6% |
| **White** | 579,344 | 594,724 | 624,512 | 634,895 | 642,139 | 638,368 | 634,940 | 633,855 | 641,820 | 672,138 | 670,152 | 662,404 | 658,306 | 638,270 | 671,300 | 58,926 | 10.2% | 5.2% |
| **Public Two-Year** | 245,636 | 256,285 | 274,317 | 278,838 | 286,077 | 284,960 | 282,716 | 284,631 | 292,125 | 319,456 | 319,241 | 309,310 | 292,625 | 281,875 | 305,156 | 36,239 | 14.8% | 8.3% |
| **Public Four-Year** | 249,901 | 254,023 | 262,938 | 268,377 | 268,477 | 267,238 | 266,181 | 264,812 | 265,742 | 271,148 | 268,804 | 266,817 | 263,502 | 259,446 | 279,331 | 9,545 | 3.8% | 7.7% |
| **Independent & Career** | 83,807 | 84,416 | 87,257 | 87,680 | 87,585 | 86,170 | 86,043 | 84,412 | 83,953 | 81,534 | 82,107 | 86,277 | 102,179 | 96,949 | 86,813 | 13,142 | 15.7% | -10.5% |
| **Other** | 105,164 | 117,174 | 125,034 | 124,938 | 130,332 | 133,818 | 137,498 | 145,815 | 154,799 | 176,615 | 215,432 | 225,749 | 220,749 | 220,371 | | 115,207 | 109.5% | |
| **Public Two-Year** | 34,369 | 40,250 | 43,861 | 43,256 | 45,236 | 48,247 | 50,198 | 53,822 | 58,852 | 66,414 | 85,142 | 81,488 | 77,805 | 75,935 | | 41,566 | 120.9% | |
| **Public Four-Year** | 53,265 | 57,895 | 62,769 | 65,430 | 67,383 | 66,863 | 68,468 | 71,682 | 74,981 | 78,597 | 93,105 | 95,749 | 97,839 | 101,200 | | 47,935 | 90.0% | |
| **Independent & Career** | 17,530 | 19,029 | 18,404 | 16,252 | 17,713 | 18,708 | 18,832 | 20,311 | 20,966 | 31,604 | 37,185 | 48,512 | 45,105 | 43,236 | | 25,706 | 146.6% | |

Note: No targets were set for "other" enrollment.

## Appendix Table A-2: Trend Line Data Points for Change in Participation from Fall 2000-2015 to Meet *CTG* Targets at Public, Independent, and Career Higher Education Institutions

| Race/Ethnicity | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | 29,897 | 59,793 | 89,690 | 119,586 | 149,483 | 200,283 | 251,083 | 301,883 | 352,683 | 403,483 | 448,883 | 494,283 | 539,683 | 585,083 | 630,483 |
| **African American** | 4,707 | 9,415 | 14,122 | 18,830 | 23,537 | 28,797 | 34,057 | 39,317 | 44,577 | 49,837 | 52,717 | 55,597 | 58,477 | 61,357 | 64,237 |
| **Hispanic** | 20,521 | 41,042 | 61,564 | 82,085 | 102,606 | 129,406 | 156,206 | 183,006 | 209,806 | 236,606 | 277,026 | 317,446 | 357,866 | 398,286 | 438,706 |
| **White** | 4,190 | 8,379 | 12,569 | 16,758 | 20,948 | 34,848 | 48,748 | 62,648 | 76,548 | 90,448 | 92,608 | 94,768 | 96,928 | 99,088 | 101,248 |

**Appendix Table A-3: Fall Enrollment in Public, Independent, and Career Institutions as a Percentage of the Population (All Ages) by Race/Ethnicity and Gender**

| Race/Ethnicity & Gender | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Point Change 2000 to 2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | 5.0% | 5.1% | 5.4% | 5.4% | 5.5% | 5.4% | 5.4% | 5.4% | 5.5% | 5.9% | 6.2% | 6.3% | 6.3% | 6.2% | 1.2% |
| **Female** | 5.5% | 5.7% | 6.0% | 6.1% | 6.2% | 6.1% | 6.1% | 6.1% | 6.2% | 6.7% | 7.0% | 7.1% | 7.2% | 7.0% | 1.5% |
| **Male** | 4.5% | 4.6% | 4.7% | 4.7% | 4.7% | 4.7% | 4.6% | 4.6% | 4.7% | 5.1% | 5.4% | 5.4% | 5.4% | 5.3% | 0.9% |
| **Point Difference** | 1.0% | 1.1% | 1.2% | 1.4% | 1.4% | 1.5% | 1.5% | 1.5% | 1.5% | 1.6% | 1.6% | 1.7% | 1.8% | 1.6% | 0.6% |
| **African American** | 4.7% | 4.8% | 5.2% | 5.3% | 5.5% | 5.4% | 5.5% | 5.5% | 5.7% | 6.6% | 7.1% | 7.6% | 7.9% | 7.6% | 3.0% |
| **Female** | 5.6% | 5.9% | 6.4% | 6.5% | 6.7% | 6.7% | 6.7% | 6.7% | 7.0% | 8.1% | 8.6% | 9.3% | 9.7% | 9.3% | 3.7% |
| **Male** | 3.7% | 3.8% | 4.0% | 4.1% | 4.2% | 4.1% | 4.1% | 4.2% | 4.4% | 5.1% | 5.5% | 5.8% | 5.9% | 5.8% | 2.2% |
| **Point Difference** | 1.9% | 2.1% | 2.3% | 2.5% | 2.5% | 2.6% | 2.6% | 2.5% | 2.6% | 3.0% | 3.1% | 3.5% | 3.8% | 3.5% | 1.5% |
| **Hispanic** | 3.6% | 3.7% | 3.9% | 3.9% | 4.0% | 4.0% | 4.0% | 4.0% | 4.1% | 4.5% | 4.9% | 5.0% | 5.2% | 5.2% | 1.5% |
| **Female** | 4.2% | 4.3% | 4.6% | 4.7% | 4.8% | 4.8% | 4.9% | 4.9% | 5.0% | 5.4% | 5.7% | 5.9% | 6.1% | 6.1% | 1.9% |
| **Male** | 3.1% | 3.1% | 3.2% | 3.2% | 3.2% | 3.2% | 3.2% | 3.2% | 3.3% | 3.6% | 4.0% | 4.2% | 4.3% | 4.3% | 1.2% |
| **Point Difference** | 1.1% | 1.2% | 1.4% | 1.5% | 1.6% | 1.6% | 1.6% | 1.6% | 1.7% | 1.8% | 1.6% | 1.7% | 1.8% | 1.8% | 0.7% |
| **White** | 5.2% | 5.3% | 5.6% | 5.7% | 5.7% | 5.7% | 5.6% | 5.6% | 5.6% | 5.9% | 5.9% | 5.8% | 5.7% | 5.5% | 0.3% |
| **Female** | 5.6% | 5.8% | 6.1% | 6.2% | 6.3% | 6.2% | 6.2% | 6.1% | 6.2% | 6.5% | 6.5% | 6.4% | 6.4% | 6.1% | 0.5% |
| **Male** | 4.8% | 4.9% | 5.1% | 5.1% | 5.1% | 5.1% | 5.0% | 5.0% | 5.1% | 5.3% | 5.3% | 5.2% | 5.1% | 4.9% | 0.1% |
| **Point Difference** | 0.8% | 0.9% | 1.0% | 1.1% | 1.1% | 1.2% | 1.1% | 1.1% | 1.1% | 1.2% | 1.2% | 1.2% | 1.3% | 1.2% | 0.3% |

Note: Differences and changes are expressed as percentage points.

# Appendix B: Success Data

## Appendix Table B-1: Awards at Public, Independent, and Career Higher Education Institutions, FY 2000-2013, and *CTG* Targets

| Type of Award and Institution | Degrees and Certificates Awarded | | | | | | | | | | | | | | *CTG* Target 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | |
| **Bachelor's Degrees, Associate Degrees, & Certificates (BAC)** | 116,235 | 116,754 | 124,626 | 132,478 | 144,142 | 149,983 | 155,527 | 159,288 | 176,449 | 188,927 | 207,422 | 221,538 | 236,682 | 242,823 | 210,000 |
| **Public Two-Year** | 40,553 | 40,444 | 44,697 | 49,988 | 53,851 | 56,858 | 57,020 | 58,202 | 58,940 | 64,475 | 73,963 | 81,169 | 87,377 | 93,402 | |
| **Public Four-Year** | 58,818 | 59,337 | 61,995 | 63,777 | 67,099 | 69,852 | 73,182 | 75,951 | 78,384 | 81,425 | 83,329 | 86,537 | 89,589 | 93,779 | |
| **Independent & Career** | 16,864 | 16,973 | 17,934 | 18,713 | 23,192 | 23,273 | 25,325 | 25,135 | 39,125 | 43,027 | 50,130 | 53,832 | 59,716 | 55,642 | |
| **Bachelor's** | 74,906 | 75,286 | 78,919 | 81,141 | 84,595 | 86,473 | 89,789 | 93,032 | 98,349 | 101,943 | 105,222 | 109,476 | 117,114 | 121,310 | 112,500 |
| **Public Two-Year** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 46 | 112 | 131 | 158 | 138 | 166 | |
| **Public Four-Year** | 58,574 | 58,988 | 61,611 | 63,356 | 66,742 | 69,505 | 72,837 | 75,577 | 77,989 | 81,014 | 82,881 | 86,046 | 89,205 | 93,374 | |
| **Independent & Career** | 16,332 | 16,298 | 17,308 | 17,785 | 17,853 | 16,968 | 16,952 | 17,425 | 20,314 | 20,817 | 22,210 | 23,272 | 27,771 | 27,770 | |
| **Associate** | 25,505 | 25,363 | 27,512 | 30,482 | 37,477 | 40,016 | 41,267 | 41,613 | 44,168 | 47,354 | 54,127 | 59,239 | 69,896 | 70,533 | 55,500 |
| **Public Two-Year** | 24,810 | 24,549 | 26,765 | 29,599 | 32,688 | 35,070 | 36,559 | 37,309 | 38,903 | 41,732 | 48,253 | 52,089 | 58,152 | 61,139 | |
| **Public Four-Year** | 163 | 139 | 121 | 144 | 177 | 166 | 177 | 168 | 185 | 242 | 242 | 282 | 241 | 274 | |
| **Independent & Career** | 532 | 675 | 626 | 739 | 4,612 | 4,780 | 4,531 | 4,136 | 5,080 | 5,380 | 5,632 | 6,868 | 11,503 | 9,120 | |
| **Doctorates** | 2,629 | 2,671 | 2,539 | 2,577 | 2,729 | 2,981 | 3,220 | 3,623 | 3,776 | 3,728 | 3,832 | 3,995 | 4,343 | 4,627 | 3,900 |
| **Public Two-Year** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Public Four-Year** | 2,297 | 2,318 | 2,238 | 2,203 | 2,356 | 2,560 | 2,780 | 3,123 | 3,216 | 3,083 | 3,249 | 3,432 | 3,637 | 3,914 | |
| **Independent & Career** | 332 | 353 | 301 | 374 | 373 | 421 | 440 | 500 | 560 | 645 | 583 | 563 | 706 | 713 | |
| **African-American BAC** | 11,215 | 11,756 | 12,625 | 13,373 | 15,592 | 15,872 | 16,574 | 16,905 | 19,113 | 21,346 | 22,956 | 25,183 | 29,359 | 29,687 | 24,300 |
| **Public Two-Year** | 5,192 | 5,447 | 6,013 | 6,428 | 7,082 | 7,093 | 6,705 | 7,131 | 6,982 | 7,877 | 8,706 | 9,846 | 10,511 | 11,544 | |
| **Public Four-Year** | 4,323 | 4,559 | 4,805 | 5,136 | 5,576 | 5,723 | 6,213 | 6,616 | 6,821 | 7,579 | 7,998 | 8,436 | 8,988 | 9,220 | |
| **Independent & Career** | 1,700 | 1,750 | 1,807 | 1,809 | 2,934 | 3,056 | 3,656 | 3,158 | 5,310 | 5,890 | 6,252 | 6,901 | 9,860 | 8,923 | |
| **Hispanic BAC** | 23,368 | 24,036 | 26,251 | 28,832 | 32,961 | 35,625 | 38,001 | 40,306 | 47,837 | 52,739 | 55,850 | 65,386 | 73,119 | 76,686 | 67,000 |
| **Public Two-Year** | 10,207 | 10,538 | 11,833 | 13,735 | 15,488 | 16,724 | 17,414 | 17,923 | 18,326 | 20,446 | 24,024 | 27,495 | 30,999 | 34,004 | |
| **Public Four-Year** | 10,879 | 11,135 | 11,974 | 12,502 | 13,263 | 14,504 | 15,478 | 17,055 | 17,971 | 19,511 | 20,605 | 21,901 | 23,130 | 25,138 | |
| **Independent & Career** | 2,282 | 2,363 | 2,444 | 2,595 | 4,210 | 4,397 | 5,109 | 5,328 | 11,540 | 12,782 | 11,221 | 15,990 | 18,990 | 17,544 | |
| **Technology BAC** | 11,979 | 12,122 | 12,720 | 14,578 | 14,336 | 13,677 | 12,978 | 12,666 | 12,877 | 13,999 | 15,225 | 17,109 | 18,120 | 19,874 | 29,000 |
| **Public Two-Year** | 5,084 | 5,140 | 5,428 | 7,267 | 6,966 | 6,169 | 5,277 | 5,251 | 5,360 | 6,157 | 7,159 | 8,294 | 8,527 | 9,468 | |
| **Public Four-Year** | 6,895 | 6,982 | 7,292 | 7,311 | 7,370 | 7,508 | 7,701 | 7,415 | 7,517 | 7,842 | 8,066 | 8,815 | 9,593 | 10,406 | |
| **Computer Science** | 4,002 | 4,352 | 4,759 | 5,507 | 5,110 | 4,198 | 3,455 | 3,102 | 2,867 | 3,206 | 3,833 | 4,484 | 4,846 | 5,607 | |
| **Math** | 744 | 700 | 766 | 817 | 938 | 949 | 1,028 | 1,062 | 959 | 1,073 | 1,048 | 1,160 | 1,269 | 1,485 | |
| **Physical Science** | 1,153 | 1,094 | 1,192 | 808 | 829 | 821 | 957 | 966 | 1,041 | 1,108 | 1,185 | 1,289 | 1,346 | 1,480 | |
| **Engineering** | 6,080 | 5,976 | 6,003 | 7,446 | 7,459 | 7,709 | 7,538 | 7,536 | 8,010 | 8,612 | 9,159 | 10,176 | 10,659 | 11,302 | |
| **Allied Health & Nursing BAC** | 13,207 | 12,878 | 12,960 | 13,535 | 15,019 | 16,113 | 17,289 | 17,924 | 18,184 | 19,912 | 21,225 | 23,261 | 25,161 | 26,505 | 26,100 |
| **Public Two-Year** | 9,388 | 9,026 | 9,224 | 9,861 | 11,117 | 11,962 | 12,838 | 13,041 | 12,901 | 14,254 | 14,946 | 16,016 | 16,682 | 16,859 | |
| **Public Four-Year** | 3,819 | 3,852 | 3,736 | 3,674 | 3,902 | 4,151 | 4,451 | 4,883 | 5,283 | 5,658 | 6,279 | 7,245 | 8,479 | 9,646 | |
| **BSN** | 2,004 | 1,961 | 2,056 | 2,125 | 2,345 | 2,430 | 2,607 | 2,944 | 3,266 | 3,476 | 4,044 | 4,916 | 6,062 | 6,903 | |
| **ADN** | 2,752 | 2,695 | 2,708 | 3,220 | 3,496 | 3,595 | 3,984 | 4,141 | 4,566 | 4,819 | 5,240 | 5,754 | 5,739 | 5,985 | |
| **Other Nursing** | 2,847 | 2,601 | 2,812 | 2,933 | 3,058 | 3,457 | 3,494 | 3,620 | 3,203 | 3,675 | 3,561 | 3,814 | 3,919 | 3,646 | |
| **Allied Health** | 5,604 | 5,621 | 5,384 | 5,257 | 6,120 | 6,631 | 7,204 | 7,219 | 7,149 | 7,942 | 8,380 | 8,777 | 9,441 | 9,971 | |
| **Total Teacher Initial Certifications** | 11,807 | 14,383 | 17,708 | 21,453 | 22,885 | 23,160 | 24,686 | 25,229 | 26,360 | 25,777 | 25,152 | 23,737 | 18,088 | 19,787 | 44,700 |
| **Math & Science Teacher Initial Certifications** | 2,156 | 2,473 | 2,972 | 3,061 | 2,498 | 2,737 | 2,991 | 3,044 | 3,373 | 3,210 | 3,581 | 3,450 | 2,644 | 2,756 | 6,500 |

## Appendix Table B-2: Success Trend Line Data Points, FY 2001-2015, to Meet *CTG* Targets

| Type of Award | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bachelor's Degrees, Associate Degrees, & Certificates (BAC)** | 119,788 | 123,341 | 126,894 | 130,447 | 134,000 | 141,400 | 148,800 | 156,200 | 163,600 | 171,000 | 178,800 | 186,600 | 194,400 | 202,200 | 210,000 |
| **Bachelor's** | 77,425 | 79,944 | 82,462 | 84,981 | 87,500 | 90,000 | 92,500 | 95,000 | 97,500 | 100,000 | 102,500 | 105,000 | 107,500 | 110,000 | 112,500 |
| **Associate** | 26,004 | 26,503 | 27,002 | 27,501 | 28,000 | 31,080 | 34,160 | 37,240 | 40,320 | 43,400 | 45,820 | 48,240 | 50,660 | 53,080 | 55,500 |
| **Doctorates** | 2,663 | 2,697 | 2,732 | 2,766 | 2,800 | 2,910 | 3,020 | 3,130 | 3,240 | 3,350 | 3,460 | 3,570 | 3,680 | 3,790 | 3,900 |
| **African-American BAC** | 11,572 | 11,929 | 12,286 | 12,643 | 13,000 | 14,360 | 15,720 | 17,080 | 18,440 | 19,800 | 20,700 | 21,600 | 22,500 | 23,400 | 24,300 |
| **Hispanic BAC** | 24,894 | 26,421 | 27,947 | 29,474 | 31,000 | 34,800 | 38,600 | 42,400 | 46,200 | 50,000 | 53,400 | 56,800 | 60,200 | 63,600 | 67,000 |
| **Technology BAC** | 13,383 | 14,787 | 16,192 | 17,596 | 19,000 | 20,000 | 21,000 | 22,000 | 23,000 | 24,000 | 25,000 | 26,000 | 27,000 | 28,000 | 29,000 |
| **Allied Health & Nursing BAC** | 13,266 | 13,324 | 13,383 | 13,441 | 13,500 | 14,860 | 16,220 | 17,580 | 18,940 | 20,300 | 21,460 | 22,620 | 23,780 | 24,940 | 26,100 |
| **Total Teacher Initial Certifications** | 15,160 | 17,320 | 19,480 | 21,640 | 23,800 | 25,960 | 28,120 | 30,280 | 32,440 | 34,600 | 36,620 | 38,640 | 40,660 | 42,680 | 44,700 |
| **Math & Science Teacher Initial Certifications** | 2,585 | 3,014 | 3,442 | 3,871 | 4,300 | 4,520 | 4,740 | 4,960 | 5,180 | 5,400 | 5,620 | 5,840 | 6,060 | 6,280 | 6,500 |

# Appendix C: Research Data

## Appendix Table C-1: Federal Science and Engineering Obligations for Research and Development (Current $ Thousands) at Public and Independent Higher Education Institutions for U.S. and Top Seven States, FY 1999-2011

| State | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **U.S. Total** | $15,569,103 | $17,289,808 | $19,390,153 | $21,154,640 | $22,804,253 | $23,810,968 | $24,683,582 | $24,991,759 | $24,997,977 | $25,489,111 | $31,778,564 | $30,633,100 | $27,939,146 |
| **California** | $2,247,783 | $2,517,086 | $2,697,229 | $2,951,472 | $3,193,421 | $3,458,540 | $3,543,306 | $3,438,431 | $3,462,085 | $3,536,805 | $4,242,017 | $4,279,491 | $3,933,590 |
| **% of U.S. Total** | 14.4% | 14.6% | 13.9% | 14.0% | 14.0% | 14.5% | 14.4% | 13.8% | 13.8% | 13.9% | 13.3% | 14.0% | 14.1% |
| **New York** | $1,269,773 | $1,410,518 | $1,580,912 | $1,682,187 | $1,857,646 | $1,948,714 | $2,043,527 | $2,008,024 | $1,988,089 | $1,989,005 | $2,516,164 | $2,405,472 | $2,177,306 |
| **% of U.S. Total** | 8.2% | 8.2% | 8.2% | 8.0% | 8.1% | 8.2% | 8.3% | 8.0% | 8.0% | 7.8% | 7.9% | 7.9% | 7.8% |
| **Pennsylvania** | $990,736 | $1,082,830 | $1,239,294 | $1,378,756 | $1,417,348 | $1,489,570 | $1,450,944 | $1,523,649 | $1,545,234 | $1,515,609 | $1,928,099 | $1,887,537 | $1,784,882 |
| **% of U.S. Total** | 6.4% | 6.3% | 6.4% | 6.5% | 6.2% | 6.3% | 5.9% | 6.1% | 6.2% | 5.9% | 6.1% | 6.2% | 6.4% |
| **Maryland** | $1,004,165 | $1,051,387 | $1,122,508 | $1,296,852 | $1,294,617 | $1,382,909 | $1,408,930 | $1,552,173 | $1,436,628 | $1,459,843 | $1,905,830 | $1,972,722 | $1,823,177 |
| **% of U.S. Total** | 6.4% | 6.1% | 5.8% | 6.1% | 5.7% | 5.8% | 5.7% | 6.2% | 5.7% | 5.7% | 6.0% | 6.4% | 6.5% |
| **Massachusetts** | $937,584 | $998,935 | $1,072,841 | $1,147,934 | $1,220,700 | $1,342,039 | $1,375,164 | $1,430,248 | $1,490,052 | $1,505,846 | $1,834,375 | $1,736,407 | $1,579,725 |
| **% of U.S. Total** | 6.0% | 5.8% | 5.5% | 5.4% | 5.4% | 5.6% | 5.6% | 5.7% | 6.0% | 5.9% | 5.8% | 5.7% | 5.7% |
| **Texas** | $834,577 | $958,185 | $1,147,752 | $1,222,324 | $1,385,229 | $1,342,911 | $1,365,244 | $1,391,337 | $1,411,896 | $1,502,334 | $1,807,428 | $1,713,797 | $1,451,939 |
| **% of U.S. Total** | 5.4% | 5.5% | 5.9% | 5.8% | 6.1% | 5.6% | 5.5% | 5.6% | 5.6% | 5.9% | 5.7% | 5.6% | 5.2% |
| **North Carolina** | $573,092 | $636,881 | $766,285 | $841,951 | $938,818 | $948,086 | $1,019,245 | $1,078,918 | $1,076,191 | $1,064,899 | $1,325,700 | $1,242,312 | $1,155,671 |
| **% of U.S. Total** | 3.7% | 3.7% | 4.0% | 4.0% | 4.1% | 4.0% | 4.1% | 4.3% | 4.3% | 4.2% | 4.2% | 4.1% | 4.1% |

Source: National Science Foundation, Survey of Federal S&E Support to Universities, Colleges, and Nonprofit Institutions: Federal Obligations for Research and Development. Available online at: https://webcaspar.nsf.gov/index.jsp?subHeader=WebCASPARHome

## Appendix Table C-2: Trend Line Data Points for Percent of U.S. Total Research and Development Obligations to Meet *CTG* Targets, FY 2000-2015

| Type of Data | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **% of U.S. Total** | 5.50% | 5.57% | 5.64% | 5.71% | 5.78% | 5.85% | 5.92% | 5.99% | 6.06% | 6.13% | 6.20% | 6.26% | 6.32% | 6.38% | 6.44% | 6.50% |

## Appendix Table C-3: Expenditures for Research and Development (Current $ Thousands) by Source of Funds at Texas Public Four-Year Higher Education Institutions, FY 1999-2013

| Type of Institution and Source | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Public Universities** | | | | | | | | | | | | | | | |
| **Federal** | $429,469 | $466,342 | $501,649 | $564,550 | $581,314 | $598,223 | $687,231 | $715,512 | $762,459 | $828,254 | $860,044 | $945,238 | $959,645 | $928,112 | $963,986 |
| **State-Appropriated** | $113,107 | $146,241 | $154,227 | $181,170 | $192,545 | $164,060 | $178,457 | $188,607 | $194,793 | $224,617 | $258,909 | $262,752 | $270,060 | $254,527 | $275,238 |
| **State Grants and Contracts** | $80,162 | $70,326 | $80,609 | $96,572 | $98,792 | $89,478 | $99,235 | $98,129 | $112,385 | $112,838 | $126,235 | $125,293 | $139,653 | $134,405 | $119,615 |
| **Institutional** | $88,518 | $80,512 | $77,158 | $92,735 | $102,690 | $109,589 | $129,826 | $139,173 | $144,064 | $176,640 | $208,213 | $249,548 | $272,829 | $294,971 | $318,207 |
| **Private – Profit** | $29,205 | $53,546 | $63,347 | $64,765 | $61,670 | $62,315 | $71,011 | $79,413 | $86,185 | $115,434 | $128,414 | $144,419 | $179,018 | $171,660 | $173,630 |
| **Private – Nonprofit** | $88,733 | $64,305 | $71,233 | $76,996 | $81,401 | $85,935 | $76,930 | $77,920 | $84,960 | $84,659 | $104,711 | $110,745 | $112,661 | $135,979 | $151,244 |
| **Total** | $829,194 | $881,271 | $948,223 | $1,076,789 | $1,118,412 | $1,109,602 | $1,242,691 | $1,298,753 | $1,384,846 | $1,542,443 | $1,686,527 | $1,837,995 | $1,933,865 | $1,919,655 | $2,001,919 |
| **Public Health-Related Institutions** | | | | | | | | | | | | | | | |
| **Federal** | $367,176 | $421,090 | $479,224 | $577,718 | $639,417 | $709,811 | $752,991 | $787,661 | $796,944 | $836,908 | $857,479 | $919,226 | $951,724 | $843,503 | $806,491 |
| **State-Appropriated** | $83,801 | $90,655 | $94,141 | $119,859 | $133,768 | $149,561 | $164,507 | $205,871 | $210,984 | $251,078 | $261,218 | $284,766 | $305,890 | $331,450 | $299,966 |
| **State Grants and Contracts** | $4,114 | $8,082 | $13,790 | $16,843 | $10,414 | $11,525 | $11,621 | $18,810 | $24,294 | $21,305 | $30,767 | $38,211 | $70,767 | $78,995 | $85,109 |
| **Institutional** | $11,367 | $27,624 | $38,793 | $38,501 | $38,962 | $43,951 | $51,283 | $70,291 | $82,275 | $110,797 | $134,385 | $134,303 | $128,353 | $143,879 | $208,488 |
| **Private – Profit** | $60,196 | $57,762 | $63,032 | $78,841 | $79,164 | $67,522 | $78,454 | $82,281 | $93,615 | $112,523 | $109,732 | $110,162 | $113,403 | $125,173 | $144,881 |
| **Private – Nonprofit** | $95,875 | $116,072 | $132,457 | $141,687 | $154,054 | $160,926 | $167,100 | $178,450 | $207,523 | $212,997 | $229,945 | $221,801 | $243,006 | $253,880 | $240,071 |
| **Total** | $622,528 | $721,284 | $821,437 | $973,451 | $1,055,780 | $1,143,296 | $1,225,956 | $1,343,363 | $1,415,636 | $1,545,608 | $1,623,526 | $1,708,469 | $1,813,143 | $1,776,880 | $1,785,006 |
| **Public Universities and Health-Related Institutions** | | | | | | | | | | | | | | | |
| **Federal** | $796,645 | $887,432 | $980,873 | $1,142,269 | $1,220,731 | $1,308,035 | $1,440,222 | $1,503,173 | $1,559,403 | $1,665,163 | $1,717,523 | $1,864,464 | $1,911,370 | $1,771,615 | $1,770,477 |
| **State-Appropriated** | $196,908 | $236,896 | $248,368 | $301,029 | $326,314 | $313,621 | $342,964 | $394,478 | $405,778 | $490,325 | $522,722 | $547,518 | $575,950 | $585,977 | $575,204 |
| **State Grants and Contracts** | $84,275 | $78,408 | $94,400 | $113,415 | $109,206 | $101,004 | $110,856 | $116,939 | $136,679 | $134,143 | $157,002 | $163,504 | $210,420 | $213,400 | $204,724 |
| **Institutional** | $99,885 | $108,135 | $115,951 | $131,237 | $141,652 | $153,540 | $181,109 | $209,463 | $226,339 | $289,079 | $342,598 | $383,846 | $401,182 | $438,850 | $526,695 |
| **Private – Profit** | $89,400 | $111,308 | $126,379 | $143,606 | $140,835 | $129,837 | $149,465 | $161,694 | $179,800 | $227,957 | $238,146 | $254,581 | $292,421 | $296,834 | $318,511 |
| **Private – Nonprofit** | $184,609 | $180,376 | $203,690 | $218,683 | $235,455 | $246,861 | $244,030 | $256,369 | $292,482 | $297,657 | $334,656 | $332,545 | $355,667 | $389,859 | $391,314 |
| **Total** | $1,451,722 | $1,602,555 | $1,769,660 | $2,050,240 | $2,174,192 | $2,252,898 | $2,468,647 | $2,642,116 | $2,800,482 | $3,088,051 | $3,310,053 | $3,546,463 | $3,747,009 | $3,696,535 | $3,786,925 |

## Appendix Table C-4: Trend Line Data Points for Research and Development Expenditures (Current $ Billion) to Meet *CTG* Targets

| Type of Data | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Expenditures** | 1.452 | 1.549 | 1.646 | 1.742 | 1.839 | 1.936 | 2.033 | 2.129 | 2.226 | 2.323 | 2.420 | 2.516 | 2.613 | 2.710 | 2.807 | 2.903 | 3.000 |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