



## Post-secondary Readiness for All Texas Students

by Jamie Story, Education Policy Analyst

Post-secondary readiness—preparedness for the workforce or education beyond high school—has become a prominent focus of educators and policy-makers in Texas and around the country. In Texas, legislative creation of the P-16 Council, a focus on “closing the gaps” by the Texas Higher Education Coordinating Board, and an emphasis on college readiness during the 2006 special session all point to a statewide commitment to improving post-secondary readiness for all Texas students.

At the federal level, the centerpiece of President Bush’s 2006 education agenda is the American Competitiveness Initiative, a 10-year plan with the goal of strengthening education and workforce training.<sup>1</sup> Even the national media places an emphasis on post-secondary readiness. *Newsweek*’s list of “Top 100 High Schools” ranks schools by only one measure: the percentage of students who take Advanced Placement or International Baccalaureate tests.

With this focus on post-secondary readiness, several questions arise: Should post-secondary readiness be the goal for every public school student? How does Texas measure up to that goal? What steps have been taken to ensure post-secondary readiness, and what steps remain to be taken?

### Making the case for post-secondary readiness in Texas

In considering the need for post-secondary readiness, people often argue, “College is not for everyone.”

### Recommendations

- **Ensure rigorous graduation requirements.** The State Board of Education should ensure that the requirements for science include the three laboratory-based science courses (Biology, Chemistry, and Physics), and that the fourth course of math is one that requires Algebra II as a prerequisite, such as Statistics, Pre-calculus, or Calculus.
- **Strengthen and clarify the Texas Essential Knowledge and Skills (TEKS).** As the foundation for K-12 instruction, and as the backbone of the TAKS, it is vital for the TEKS to be of the highest quality possible.
- **Restore end-of-course exams for core high school subjects.** End-of-course exams would help standardize a rigorous core curriculum.
- **Attract more teachers who are qualified to teach college-preparatory courses.** Schools should offer stipends for teachers in shortage areas, and work to recruit not only existing teachers, but also subject-area experts from higher education and private industry.
- **Establish a minimum standard for school accreditation.** The Legislature should establish a higher minimum standard (of at least 60 percent in each subject area) as the basis for an “Acceptable” school rating.

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While it is true that not all students will (or even need to) attain a four-year degree, *some* post-secondary education is becoming increasingly important in the modern economy.

- In Texas, 19 of the 25 fastest-growing occupations require some post-secondary education, with half requiring at least a bachelor’s degree.<sup>2</sup>
- In 1950, 60 percent of U.S. jobs were classified as unskilled, versus only 14 percent in 2005.<sup>3</sup>
- More than two-thirds of new jobs in the U.S. require some post-secondary education.<sup>4</sup>
- From 1973 to 2001, U.S. workers with a college degree experienced a real wage increase of 16 percent or more, while workers with a high school diploma or less experienced a decline in real wages; over that period, the pay premium for a college degree compared to high school diploma jumped from 46 percent to 76 percent.<sup>5</sup>

The U.S. economy is increasingly demanding post-secondary education of its workers, and students generally benefit financially from attaining post-secondary education. Further, several studies have

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found that the levels of readiness needed by students to be prepared for college and workforce training programs are essentially the same. For example, the American Diploma Project conducted 18 months of research in postsecondary institutions and workplaces, in order to identify what high school graduates must know in order to succeed in college or work. They found the same rigorous English and mathematics content and skills are necessary for success in both postsecondary education and employment. “No longer do students planning to go to work after high school need a different and less rigorous curriculum than those planning to go to college.”<sup>6</sup>

Similarly, ACT undertook a study examining the skills and knowledge needed for entry into post-

### Blue-Collar Jobs Require High-Level Skills

Blue-Collar Job	Skill Requirements
<b>Draftsman</b>	Recommended high school courses include Geometry and Trigonometry. Draftsmen may wish to seek additional study in mathematics and computer-aided design to keep up with technological progress within the industry.
<b>Electrician</b>	Recommended high school courses include Algebra, Geometry, Trigonometry, and Physics.
<b>Iron Worker</b>	Recommended high school courses include Algebra, Geometry, and Physics.
<b>Sheet Metal Worker</b>	Four or five years of apprenticeship. Recommended high school courses include Algebra, Geometry, Trigonometry, and technical reading.
<b>Tool &amp; Die Maker</b>	Four or five years of apprenticeship and/or postsecondary training. Recommended high school courses include Algebra, Geometry, Trigonometry, and Statistics.

Sources: American Diploma Project, 2002; The Associated General Contractors of America (AGC), <http://www.agc.org/page.wv?section=About+AGC&name=About+AGC>.

secondary education and the workplace. The study concludes:

“The results of this study underscore the importance of having a common expectation for all students when they graduate from high school: one that prepares *all* high school graduates for both credit-bearing entry-level college courses and workforce training programs associated with jobs that are likely to offer both a wage sufficient to support a small family and the potential for career advancement.”<sup>7</sup>

It is worth noting that a rigorous high school curriculum is not only necessary for white-collar, professional jobs, but for blue-collar jobs as well. According to the American Diploma Project, tool and die makers need to take algebra, geometry, trigonometry, and statistics, in addition to several years of post-secondary training and apprentice work. Many in the construction industry, including electricians, draftsmen, and surveyors, need algebra, geometry, trigonometry, and physics to be successful.<sup>8</sup>

These findings make a strong case for preparing all students for post-secondary education upon high school graduation. In his April 2006 address to the Texas Higher Education Coordinating Board, Commissioner Raymund Paredes concurred, stating, “For the small percentage of families and students who do not aspire to higher education, we want to communicate the message that college readiness largely correlates with workforce readiness and increases a young person’s options as his or her career interests invariably change.”<sup>9</sup>

But post-secondary readiness for all students is not merely an *ideal*—it is already a *statutory requirement* of public education. The Texas Education Code states, “The essential knowledge and skills shall also prepare and enable *all* [emphasis added] students to continue to learn in postsecondary education, training or employment settings.”<sup>10</sup>

Is this requirement being met?

## Are Texas students being prepared for post-secondary education?

In assessing whether or not Texas public schools are adequately preparing students for post-secondary education, it is necessary to first select one or more measures of readiness. Some readily-available measures in Texas are TAKS scores, as well as SAT and ACT participation rates and results, and it is beneficial to consider all of these measures in combination. In addition, several anecdotal pieces of evidence can help complete the picture.

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According to statute, Texas students must be assessed in reading, writing, and mathematics skills prior to enrolling in college. The Texas Higher Education Assessment<sup>i</sup> typically serves this purpose, but students may be exempted from taking the Assessment if they have a high enough score on their exit-level TAKS tests for mathematics (scale score of 2200) and English language arts (also 2200), as determined by the Texas Higher Education Coordinating Board (THECB) to indicate “college readiness”.

By this measure, the THECB reported in 2004 that 56 percent of students were college-ready in mathematics, and 36 percent in English language arts. By 2005, those numbers had risen to 62 percent and 48 percent, respectively.<sup>11</sup> Still, it is clear fewer than half of exit-level TAKS takers are prepared for college coursework in both language arts and mathematics.

These figures are even more dismal when one examines how low the THECB set these “college readiness” standards. According to information released by the THECB itself, the “college readiness” score in 11<sup>th</sup> grade mathematics only indicates a 26 percent prob-

<sup>i</sup>The Texas Higher Education Assessment (THEA) was formerly known as the Texas Academic Skills Program (TASP).

ability that a student is ready for college algebra.<sup>12</sup> Why would an indicator that is supposed to signal college readiness be set at such a low probability of success?

The SAT and ACT exams also include college-readiness indicators, although these tests are voluntary, with about 60 percent of Texas high school graduates participating in at least one of the tests.<sup>13</sup> Still, because these tests are typically taken as admissions requirements for four-year colleges and universities, they help provide an approximate indicator of post-secondary readiness among college-bound students in Texas. The results are disappointing at best. Only 38 percent of the class of 2004 “met criterion” (demonstrated college readiness, as defined by the test companies) on one or both tests.<sup>14</sup> When looking at the ACT in particular, the results are even less positive. For the class of 2006, only 18 percent of Texas students (compared to 21 percent nationally) are ready for college-level coursework, according to the ACT.<sup>15</sup> Additionally, longitudinal trends fail to offer a brighter picture. While the U.S. average SAT score increased 18 points from 1995 to 2005, the average SAT score in Texas actually decreased by one point.<sup>16</sup>

After examining TAKS, SAT, and ACT scores, it should come as no surprise that 50 percent of students entering Texas public two-year colleges and more than 40 percent of all college students statewide require remedial courses.<sup>17</sup>

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## What steps has the Texas Legislature taken to improve post-secondary readiness?

During the 2006 special session, legislators made post-secondary readiness a priority among the education reforms implemented as part of House Bill 1. The legislature took steps to improve curriculum rigor and alignment, and appropriated additional money to be used for high school graduation and college readiness programs.

As a result of House Bill 1, Texas high school graduates will be required to complete four courses in each of the four core subjects (language arts, mathematics, science, and social studies) as part of the Recommended High School Program (RHSP). The RHSP is the default graduation plan for every student in the state. While graduation under the RHSP is expected, students will be able to opt out with written permission from their parents and counselors. When students begin graduating under the new RHSP in 2011, they will have taken an additional year of both math and science beyond what today’s RHSP graduates are required to complete.

If implemented well, this reform could have a significant effect on college readiness. The high school curriculum—including what is studied, how much of it, and how intensely—is the best predictor of whether a student will obtain a bachelor’s degree. In fact, curriculum is a better indicator of post-secondary success than socioeconomic status, standardized test scores, or high school GPA.<sup>18</sup> However, simply increasing the number of courses alone will not increase academic proficiency.

Research has documented the problem of “course credit inflation”—where the level of content mastery needed to receive credit for a course declines over time.<sup>19</sup> As a result, students may get credit for classes in which they have not mastered the material. (Example: In 1999, 79 percent of students passed their Algebra I course, but only 45 percent passed the Algebra I end-of-course exam. The difference is even greater for low-income and minority students.)<sup>20</sup> Add-

ing course requirements will only improve post-secondary readiness if the content of those courses is significantly rigorous.

It is now up to the State Board of Education to effectively implement the legislature's new graduation plan. The Board must select qualifying courses that are more academically advanced than current requirements, in order to ensure that the overall rigor of the curriculum is increased.

Aside from increasing the rigor of the curriculum, the legislature also took the first step toward better aligning the curriculum between K-12 and higher education. House Bill 1 directs the commissioner of education to establish subject-specific "vertical teams" composed of public school teachers and higher education faculty members. The vertical teams will recommend college readiness standards, evaluate whether the high school curriculum meets these standards, and suggest how the curriculum can be better aligned with post-secondary expectations.

The Legislature also created the High School Allotment, which provides a lump sum to each school district, equal to \$275 per high school student in the district. Districts must use the funds to implement or administer programs that improve graduation rates and/or college readiness. (While the high school allotment was certainly created with good intentions, it is difficult to justify why schools should receive supplemental money to do what they should already be doing in the first place.) Success of the High School Allotment program will depend on the Texas Education Agency's ability to track the effects of the program, in order to identify best practices for use around the state.

### What still needs to be done to improve post-secondary readiness?

The Texas Legislature has already recognized the importance of improving post-secondary readiness, and has demonstrated its willingness to confront the issue. However, the fact that fewer than half of Texas high school graduates demonstrate college readiness signals there is ample work left to be done. The Texas Legislature, State Board of Education,


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Texas Education Agency, and local school districts should consider the following reforms, designed to further improve post-secondary readiness for all Texas students:

- **Ensure rigorous graduation requirements.** While House Bill 1 added coursework to the Recommended High School Program, it did not specify from which math and science courses students may choose. The State Board of Education should ensure that the requirements for science include the three laboratory-based science courses (Biology, Chemistry, and Physics), plus one additional laboratory-based science course for which the three courses serve as a prerequisite. In addition, the SBOE must ensure that the fourth course of math is one that requires Algebra II as a prerequisite, such as Statistics, Pre-calculus, or Calculus.
- **Strengthen and clarify the Texas Essential Knowledge and Skills (TEKS).** Reports by ACT and the Fordham Institute have found the state curriculum, or TEKS, to be vague, as well as to promote time-wasting activities and the mastering of lower-level skills.<sup>21</sup> As the foundation for K-12 instruction, and as the backbone of the TAKS, it is vital for the TEKS to be of the highest quality possible.

- **Restore end-of-course exams for core high school subjects.** End-of-course exams would help standardize a rigorous core curriculum—an important step for ensuring that students from all socioeconomic backgrounds, in all regions of Texas are adequately prepared for post-secondary employment and education.
- **Attract more teachers who are qualified to teach college-preparatory courses.** While Texas does not face an overall teacher shortage, it does face shortages in specific subjects and grade levels. Secondary math and science teachers are in particularly high demand, and increasingly so as a result of the additional year of math and science being added to the high school graduation plan. Schools should offer stipends for teachers in shortage areas, and work to recruit not only existing teachers, but also subject-area experts from higher education and private industry, to ensure the availability of college-preparatory, Advanced Placement, and dual credit courses in high school. Furthermore, the Legislature should eliminate the minimum salary schedule, so that schools have more flexibility to provide competitive salaries in areas of need.
- **Establish a minimum standard for school accreditation.** The Texas Legislature has charged the commissioner of education with setting the minimum standard for accrediting schools. In order to be ranked “Acceptable,” a school must exhibit the following minimum passing rates on the TAKS: 35 percent for science, 40 percent for math, and 60 percent for reading, writing, social studies, and English language arts. In other words, if just over one-third of a school’s students pass the science section of the TAKS, that school could still be rated “Acceptable.” Yet a school that barely meets these minimum requirements is clearly not doing an “Acceptable” job at educating its students and preparing them for post-secondary education. The Legislature should establish a higher minimum standard (of at least 60 percent in each subject area) as the basis for an “Acceptable” school rating. 

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## Endnotes

- <sup>1</sup>U.S. Department of Education website, <http://www.ed.gov/about/inits/ed/competitiveness/challenge.html>.
- <sup>2</sup>“Texas 2012 Long-Term Projections Occupation Outlook,” Texas Workforce Commission, <http://www.tracer2.com/publication.asp?PUBLICATIONID=1687>.
- <sup>3</sup>“Do All Students Need a College Prep Curriculum?” Achieve, Inc., <http://www.achieve.org/files/RequireCollegePrep.pdf>.
- <sup>4</sup>Anthony P. Carnevale and Donna M. Derochers, “Standards for What? The Economic Roots of K-12 Reform,” Educational Testing Service (2003).
- <sup>5</sup>Lynn A. Karoly and Constantijn A. Panas, *The 21<sup>st</sup> Century at Work*, RAND (2004) 112, <http://www.rand.org/pubs/monographs/MG164/>.
- <sup>6</sup>“Ready or Not: Creating a High School Diploma that Counts,” American Diploma Project, Achieve, Inc. (2004) 8-9, ([http://www.achieve.org/files/ADPreport\\_7.pdf](http://www.achieve.org/files/ADPreport_7.pdf)).
- <sup>7</sup>“Ready for College and Ready for Work: Same or Different?” ACT (2006) 8.
- <sup>8</sup>“Do All Students Need a College Prep Curriculum?” Achieve, Inc., <http://www.achieve.org/files/RequireCollegePrep.pdf>.
- <sup>9</sup>Raymund A. Paredes, *Developing a Statewide Strategy for P-16: Closing the Gaps Between Public Education and Higher Education*, Commissioner’s Report on Higher Education (Apr. 20, 2006) <http://www.theccb.state.tx.us/Commissioner/CommRep0406.pdf>.
- <sup>10</sup>Texas Education Code, Section 28.001.
- <sup>11</sup>TEA AEIS data, 2004 and 2005.
- <sup>12</sup>Chrys Dougherty, Lynn Mellor, and Nancy Smith, “Identifying Appropriate College-Readiness Standards For All Students,” National Center for Educational Accountability, Table 1:7 (May 2006) [http://www.nc4ea.org/files/College\\_Readiness\\_article-05-03-06.pdf](http://www.nc4ea.org/files/College_Readiness_article-05-03-06.pdf).
- <sup>13</sup>TEA AEIS data, 2005.
- <sup>14</sup>TEA AEIS data 2005.
- <sup>15</sup>“ACT High School Profile Report: The Graduating Class of 2006—Texas”, ACT, Figure 1.1.
- <sup>16</sup>College Board data, available at [http://www.collegeboard.com/about/news\\_info/cbsenior/yr2006/links.html](http://www.collegeboard.com/about/news_info/cbsenior/yr2006/links.html).
- <sup>17</sup>“Developmental Education: Statewide Data Profile,” Texas Higher Education Coordinating Board, <http://www.theccb.state.tx.us/OS/SuccessInitiatives/DevEd/DEData/Statewide.pdf>.
- <sup>18</sup>Cliff Adelman, “The Toolbox Revisited: Paths to Degree Completion from High School through College,” U.S. Department of Education (2006).
- <sup>19</sup>Chrys Dougherty, Lynn Mellor, and Shuling Jing, “Orange Juice or Orange Drink? Ensuring that “Advanced Courses” Live Up to Their Labels,” National Center for Educational Accountability (Feb. 2006) [http://www.nc4ea.org/files/NCEA\\_Report\\_Orange\\_Juice\\_or\\_Orange\\_Drink\\_02-13-06.pdf](http://www.nc4ea.org/files/NCEA_Report_Orange_Juice_or_Orange_Drink_02-13-06.pdf).
- <sup>20</sup>Texas Education Agency, “A Study of the Correlation between Course Performance in Algebra I and Algebra I End-of-Course Test Performance,” <http://www.tea.state.tx.us/student.assessment/resources/studies/correlation.pdf>.
- <sup>21</sup>“College Readiness of the Texas Essential Knowledge and Skills (TEKS) Compared to ACT’s Standards for Transition,” ACT (2004), and Paul R. Gross, “The State of State Science Standards,” Thomas B. Fordham Institute (Dec. 2005).

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