Meeting the Demands of the Future Workforce

*Building blocks for a globally competitive economy*

Texas Association of School Administrators
January 29, 2013
The Challenge: Texas must create and sustain a workforce that can support a transformational economy

4 of 5 Jobs lost during the recession affected workers with a high school diploma or less.
Source: Center on Education & the Workforce

13 of 20 Fastest growing careers with the potential for earnings growth require postsecondary education.
Source: Bureau of Labor Statistics

$21,000 Average annual wage difference for worker with a BA degree compared to high school graduate.
Source: State Higher Education Executive Officers Association

20% Average annual wage premium for worker with a postsecondary workforce certificate compared to high school graduate.
Source: Center on Education & the Workforce
Postsecondary education of all types leads to better opportunities in the current economic climate.

Our future workforce will demand even more postsecondary trained and educated workers.

In 1973, only 28% of all U.S. jobs required postsecondary education/skills. By 2020, 65% of the jobs will require this level of education.

59% of all jobs in Texas will require postsecondary training or education by 2020. Currently, 31% of Texans have an Associate’s degree or higher.

U.S. Workforce Projections by Required Education Level, 2020

- H.S. Dropout: 12%
- H.S. Grad: 24%
- Some college, including Certificates: 18%
- Associate’s degree or higher: 46%

Source: Georgetown University, Center on Education and the Workforce; data in charts rounded.
Unfortunately, the U.S. is projected to have a mismatch between future jobs and workforce skill/education.

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Demand</th>
<th>Supply</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>No high school diploma</td>
<td>13.6</td>
<td>19.5</td>
<td>+5.9</td>
</tr>
<tr>
<td>High school graduate</td>
<td>43.3</td>
<td>44.1</td>
<td>+0.8</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>30.7</td>
<td>29.1</td>
<td>-1.6</td>
</tr>
<tr>
<td>(Includes Postsecondary Workforce Certificates)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate degree</td>
<td>17.7</td>
<td>19.6</td>
<td>1.9</td>
</tr>
<tr>
<td>Bachelor’s degree or higher</td>
<td>58.0</td>
<td>56.5</td>
<td>-1.5</td>
</tr>
</tbody>
</table>

Postsecondary workforce certificates will be in short supply, yet represent great opportunities for **quality jobs and higher wages**

Source: Georgetown University, *Center on Education and the Workforce.*
Even jobs once considered low-skill, will require higher levels of training and expertise.

Employment in “high-skill” manufacturing occupations has increased 37% since early 1980s.

--Federal Reserve Bank of NY

“It’s not just what is being made, but to the degree that you make it at all, you make it differently.”

--David Autor, economist, MIT

“...today’s skilled factory worker is really a hybrid of an old-school machinist and a computer programmer....advanced manufacturing requires a basic understanding of metallurgy, physics, chemistry, pneumatics, electrical wiring and computer code.”

--”Skills don’t pay the bills”, NY Times Magazine, 11/20/12
If Texas is to compete on the international stage, we must improve educational attainment across the board.

However, too few Texas students make it through the education pipeline to a postsecondary credential.

19 of every 100 Texas 8th Graders complete a postsecondary credential.

11 of every 100 Hispanic 8th Graders complete a postsecondary credential.

11 of every 100 African American 8th Graders complete a postsecondary credential.

Source: THECB 8th Grade Cohort (Enrolled in 2001, Completed Postsecondary by FY 2011).
High school graduation rates have improved across the board under the Recommended High School Program curriculum.

The 2010-11 graduation rate represents the first cohort graduating under the 4x4 RHSP, which applied to the cohort of students enrolling in fall 2007.

Source: Texas Education Agency

NOTE: Reporting reflects new federal reporting standards implemented in 2009-10. Previous data cannot be directly compared with more recent data.
College readiness has improved across the board, even among students enrolling at 2-year colleges.

College readiness has increased among all racial and ethnic groups:

- African Americans: 16% points
- Hispanics: 15% points
- Whites: 14% points

Source: Texas Higher Education Coordinating Board
1. Percentage of TSI ready reflects % of first-time-in-college students who met college readiness standards (or were exempt) in all three areas measured.
2. TSI ready in all three areas among first-time-in-college students enrolling in 2-year college directly from HS
Texas has **improved scores** on the ACT national college readiness assessment

ACT College readiness has increased among all racial and ethnic groups since 2008:

- **African Americans**: 4% points
- **Hispanics**: 4% points
- **Whites**: 8% points

**FACT**: The total number of ACT test-takers has increased 39% in 5 years.

**Source**: ACT, The Condition of College & Career Readiness, 2012
The foundation for the future Texas workforce rests on **three critical building blocks**

A rigorous public education system is a fundamental building block for our future workforce and must provide a strong foundation to prepare all students for a lifetime of learning and training required of a rapidly evolving global economy.

**WORKFORCE GOAL**

60% of Texans with a postsecondary credential, certificate, or degree of value in the workplace
Texas should provide all students with a solid academic foundation while simultaneously increasing access to career and technical education.

- **Retain** the 4x4 curriculum as represented by the RHSP
- **Expand** the number of applied courses available in the fourth year such as accounting and statistics for a fourth year of math, and engineering applications for the fourth year of science
- **Create** more CTE options in early college high schools
High schools currently provide dozens of career-oriented pathways fully compliant with rigorous academic standards.

Model Curricula: Welders and Solderers

<table>
<thead>
<tr>
<th>Grade</th>
<th>Core Courses</th>
<th>Career-Related Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th</td>
<td>English I</td>
<td>Principles of Manufacturing *</td>
</tr>
<tr>
<td></td>
<td>Algebra I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Biology</td>
<td></td>
</tr>
<tr>
<td>10th</td>
<td>English II</td>
<td>World History</td>
</tr>
<tr>
<td></td>
<td>Geometry</td>
<td>Languages other than English II</td>
</tr>
<tr>
<td></td>
<td>Chemistry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Precision Metal Manufacturing* or Welding*</td>
<td></td>
</tr>
</tbody>
</table>

By statute, all high schools are required to offer at least 3 career and technical endorsements.

*CTE Course Options †Satisfies 4X4 RHSP requirements