

Meeting the Demands of the Future Workforce

*Building blocks for a globally
competitive economy*

Texas Association of School Administrators
January 29, 2013



**TEXAS HIGHER EDUCATION
COORDINATING BOARD**

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



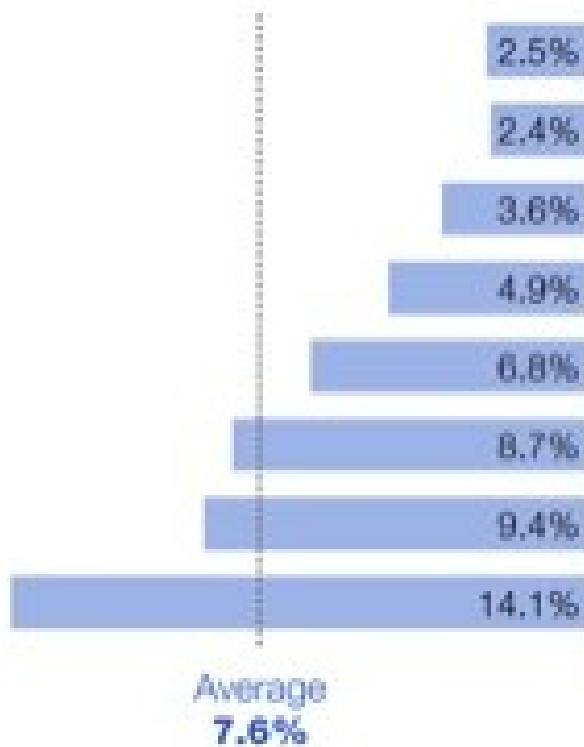
20%

Average annual wage premium for worker **with a postsecondary workforce certificate** compared to high school graduate.

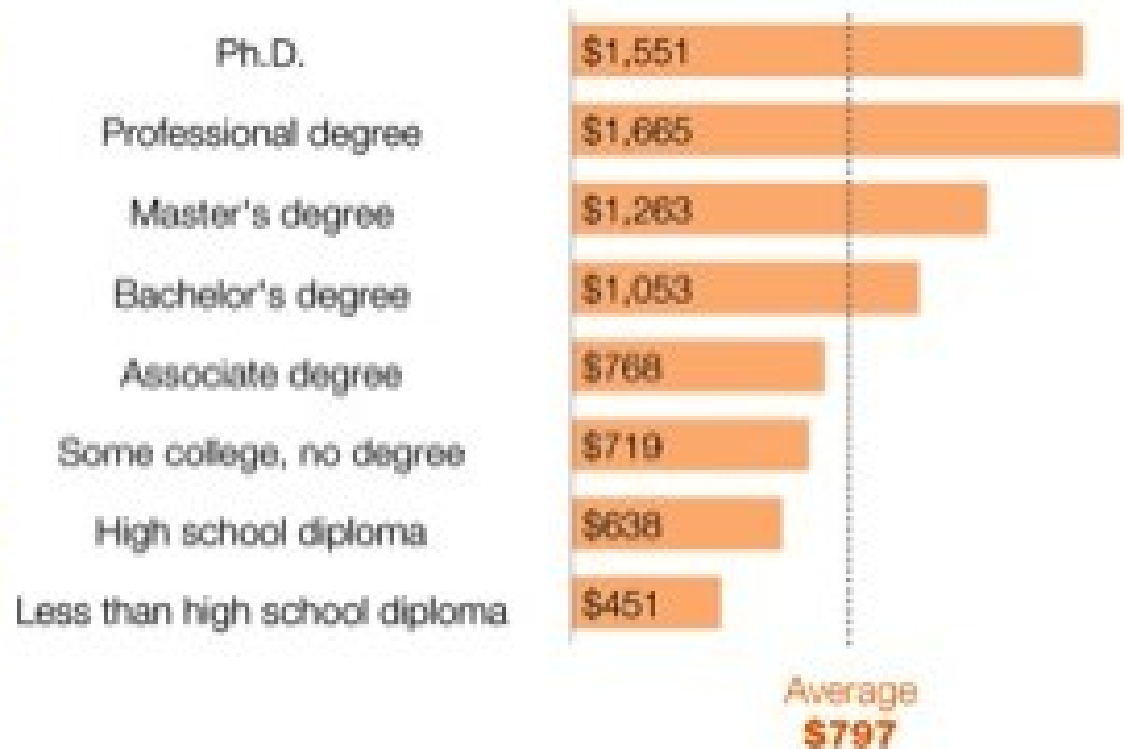
Source: Center on Education & the Workforce

Postsecondary education of all types leads to better opportunities in the current economic climate

Unemployment rate in 2011



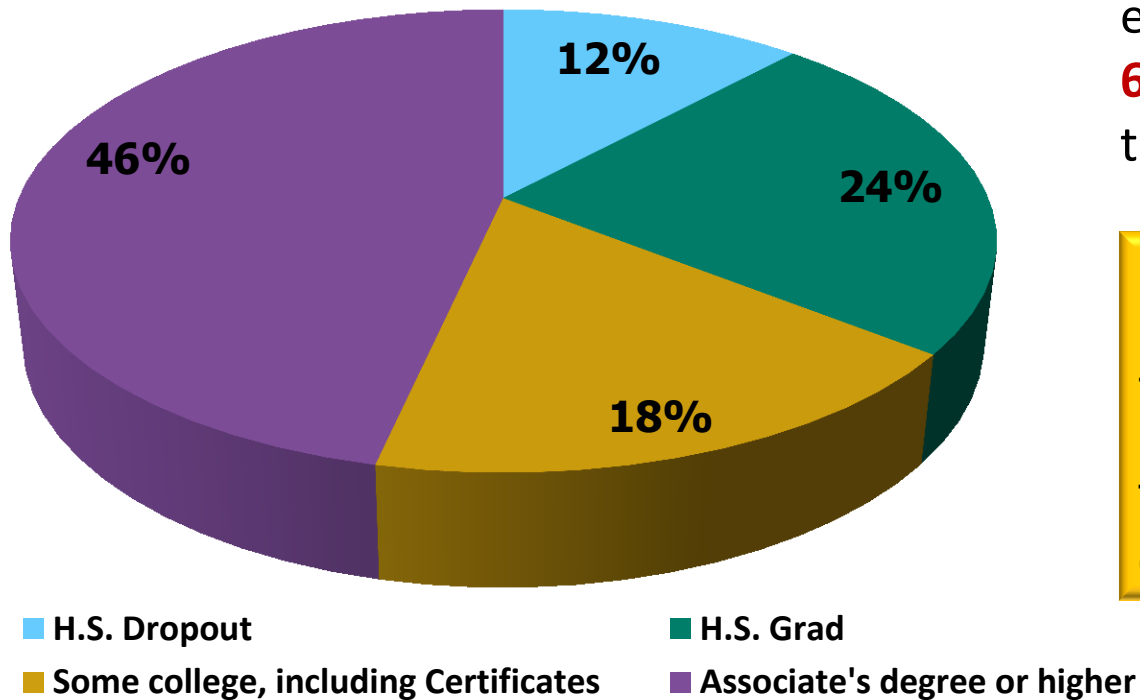
Median weekly earnings in 2011



Source: Bureau of Labor Statistics, 2012

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

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



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.

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

Demand vs. supply – 2020 projections

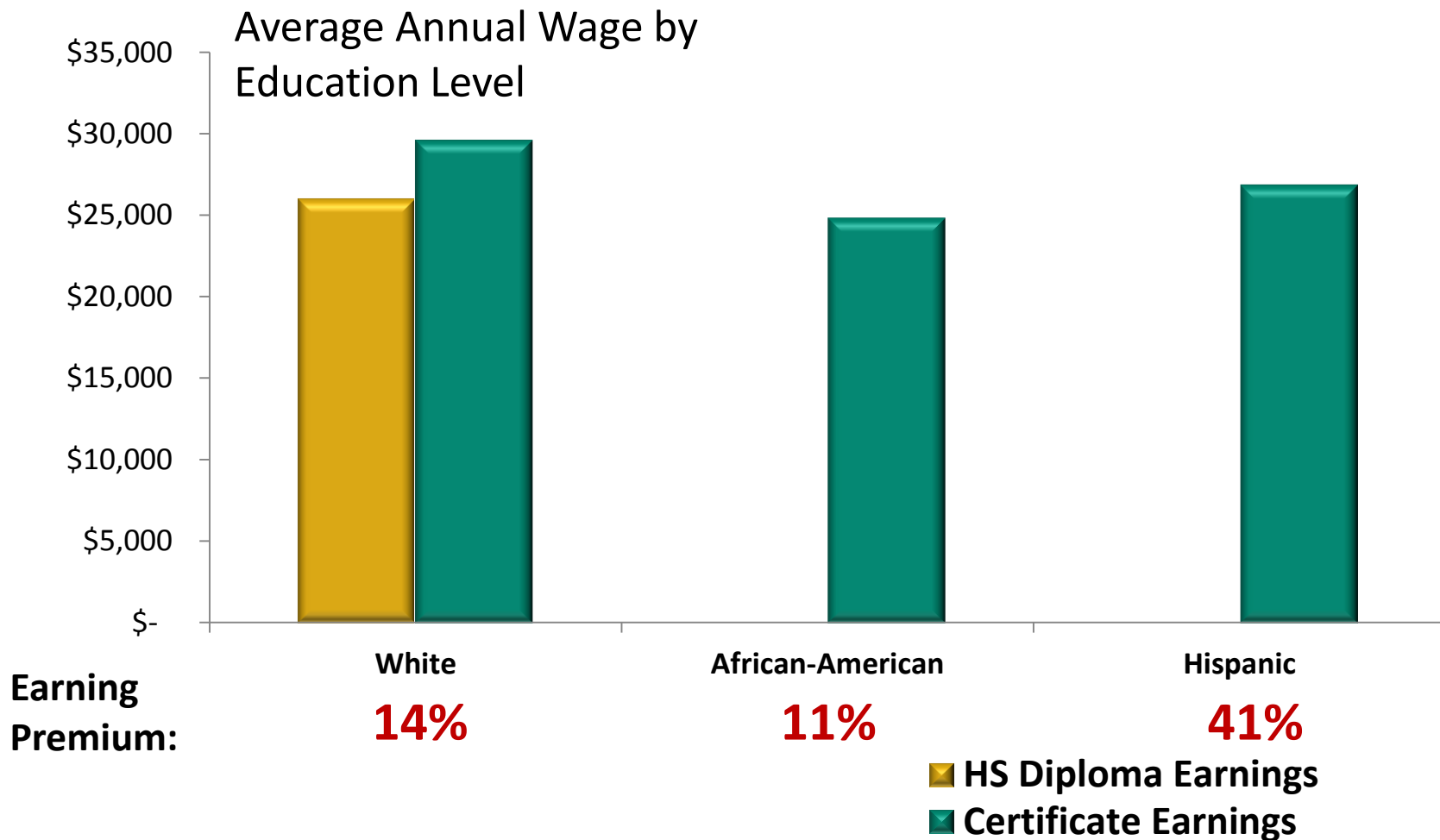
Millions

Difference

| | Demand | Supply | Difference |
|---|---------------|---------------|------------|
| No high school diploma | 13.6 | 19.5 | +5.9 |
| High school graduate | 43.3 | 44.1 | +0.8 |
| Some college, no degree <i>Includes Postsecondary Workforce Certificates</i> | 30.7 | 29.1 | -1.6 |
| Associate degree | 17.7 | 19.6 | 1.9 |
| Bachelor's degree or higher | 58.0 | 56.5 | -1.5 |
| | Demand | Supply | |

Source: U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, Mckinsey Global Institute analysis

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

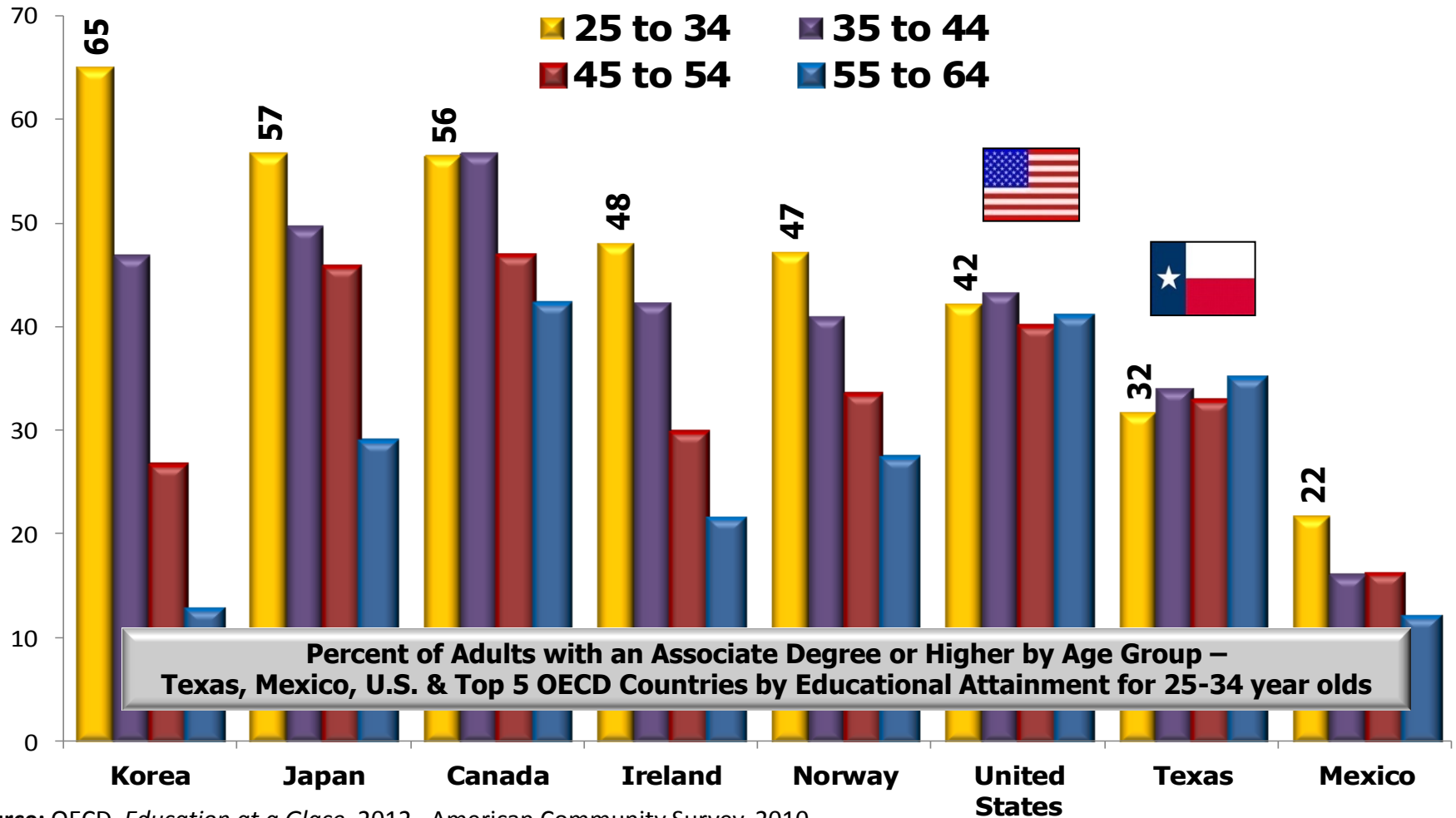
“It’s not just what is being made, but to the degree that you make it at all, **you make it differently.**”

--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



Source: OECD, *Education at a Glance*, 2012. American Community Survey, 2010

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

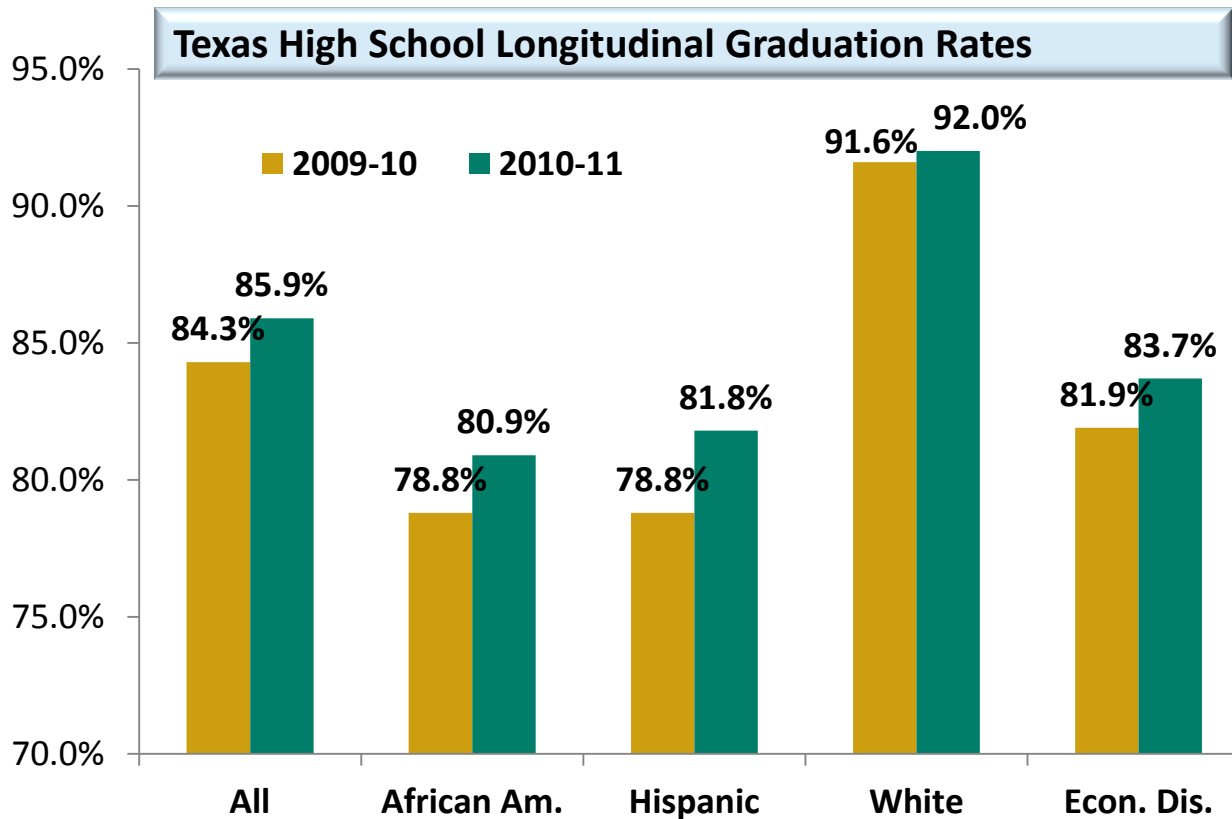
of every 100 Hispanic 8th Graders complete a postsecondary credential

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

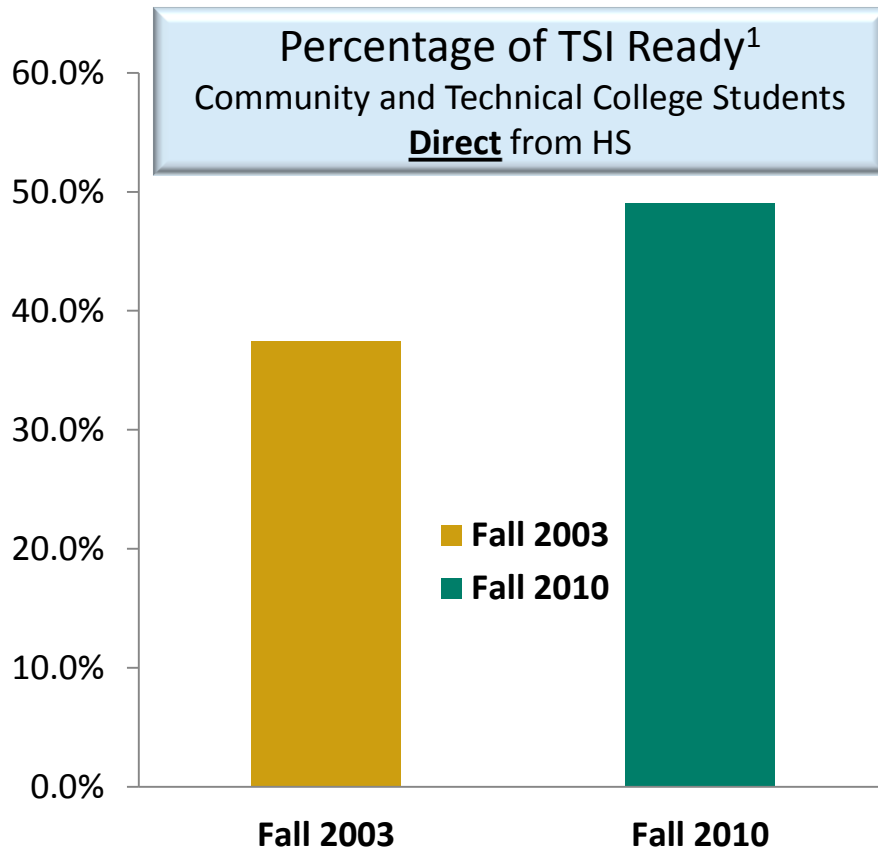


The 2010-11 graduation rate represents the first cohort graduating under the 4x4 RHSP, which applied to the cohort of students enrolling in fall 2007.

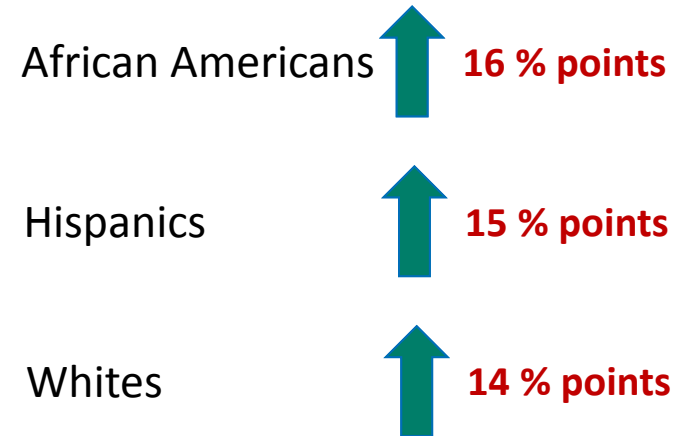
Source: Texas Education Agency

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



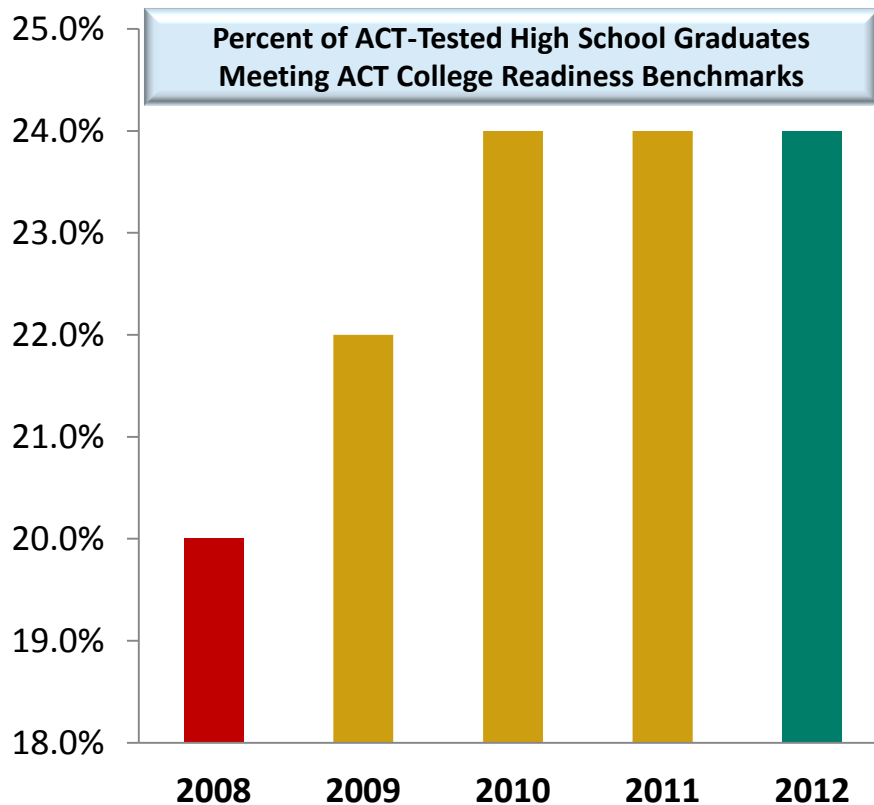
College readiness² has increased among all racial and ethnic groups:



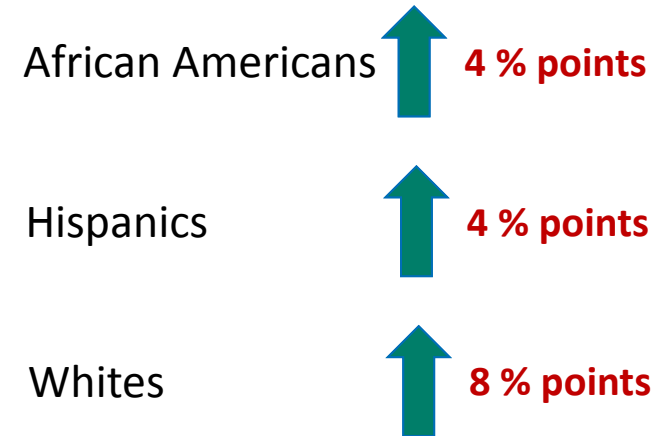
Source: Texas Higher Education Coordinating Board

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



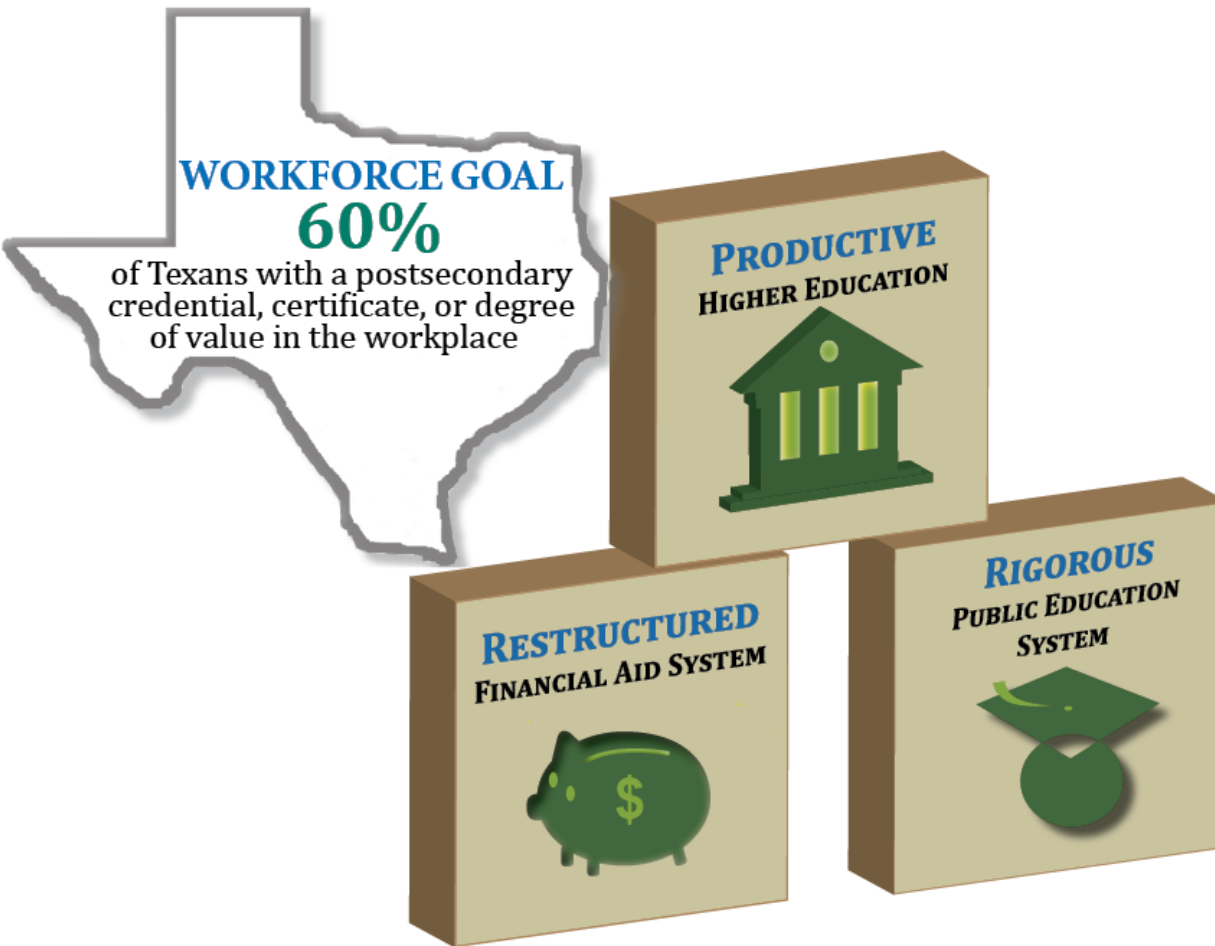
ACT College readiness has increased among all racial and ethnic groups since 2008:



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.

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

| | | | |
|------------------------|---------------------------|--|---|
| 9 th grade | Core Courses: | English I Algebra I Biology | World Geography Languages other than English I Physical Education |
| | Career-Related Electives: | Principles of Manufacturing * | |
| 10 th grade | Core Courses: | English II Geometry Chemistry | World History Languages other than English II |
| | Career-Related Electives: | Precision Metal Manufacturing* or Welding* | |

| | | | |
|------------------------|---------------------------|---|---|
| 11 th grade | Core Courses: | English III Algebra II Physics/Principles of Technology I*† | United States History Professional Communications *† |
| | Career-Related Electives: | Advanced Precision Metal Manufacturing* or Advanced Welding* | |
| 12 th grade | Core Courses: | English IV Precalculus/Engineering Mathematics*† Engineering Design and Problem Solving*† | Government/Economics Fine Arts |
| | Career-Related Electives: | Practicum in Manufacturing* or Problems and Solutions* or Career Preparation I* | |

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

*CTE Course Options †Satisfies 4X4 RHSP requirements