Career and College Readiness: A State Perspective

Mike Morath, Commissioner of Education

The History of Texas State Standards

- The SBOE first adopted curriculum standards in 1998 (TEKS), designed to identify what students should know and be able to do at every grade and in every subject area.
- In 2006, the Texas Legislature required the development of College & Career Readiness Standards (CCRS), making Texas the first state to do so.
- The CCRS may be accessed at http://www.thecb.state.tx.us/index.cfm?objectid=BCA1DEF2-02B0-B3FB-5A72BD7F7FB2448E
- The TEKS may be accessed at http://tea.texas.gov/curriculum/teks/

What is an Example of a Standard?

- First Grade Reading, Standard 2 (1.2)
- **Strand:** Reading/Beginning Reading Skills/Phonological Awareness
- Students display phonological awareness.
  - 1.2(a): Students are expected to orally generate a series of original rhyming words using a variety of phonograms (e.g., -ake, -ant, -ain) and consonant blends (e.g., bl, st, tr)

Since 2006: Aligning the TEKS with CCRS via Vertical Alignment Teams – Phase I

Vertical teams, one in each foundation subject—English, Math, Science, and Social Studies - were created to develop the College and Career Readiness Standards as a result of laws passed in 2006 by the Texas Legislature

- Each vertical team consisted of 10 members
- 40% represented public education
- 60% represented higher education
- Each team had 2 co-chairs—one from each sector
- 4 meetings were convened through **September 2007**
- Teams were facilitated by the Educational Policy Improvement Center (EPIC) from the University of Oregon

Aligning the TEKS with CCRS
CCRS Vertical Alignment Teams – Phase II

- Vertical teams were reconstituted to reflect different percentages
  - 60% Public Education
  - 40% Higher Education
- New teams also had 2 co-chairs — one from each sector
- Teams were tasked with the following:
  - Evaluating whether the TEKS prepare students for college-level course work
  - Recommending adjustments to the TEKS to appropriately incorporate the CCRS

Incorporation of CCRS in the TEKS

- The THECB adopted the standards in **January 2008**.
- The Commissioner of Education approved the standards, and the State Board of Education (SBOE) incorporated them into the Texas Essential Knowledge and Skills (TEKS) curriculum content standards as follows:
  - English language arts and reading in 2008
  - mathematics in 2009
  - science in 2009
  - social studies TEKS in 2010
- The SBOE now requires all TEKS review committees to review the CCRS and make recommendations for appropriate incorporation of the CCRS in the TEKS as part of each TEKS review and revision process

Example of Alignment

CCRS Mathematics Standard: I. Numeric Reasoning

A. Number representation: I.A.1. Compare real numbers.

TEKS

Grade 3	Grade 5	Grade 8
(2) Number and operations. The student applies mathematical process standards to represent and compare whole numbers and understand relationships related to place value. The student is expected to: (B) describe the mathematical relationships found in the base-10 place value system through the hundred thousands place; (C) represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 and use words to describe relative size of numbers in order to round whole numbers; and (D) compare and order whole numbers up to 100,000 and represent comparisons using the symbols >, <, or =.	(2) Number and operations. The student applies mathematical process standards to represent, compare, and order positive rational numbers and understand relationships as related to place value. The student is expected to: (B) compare and order two decimals to thousandths and represent comparisons using the symbols >, <, or =;	(2) Number and operations. The student applies mathematical process standards to represent and use real numbers in a variety of forms. The student is expected to: (A) extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers;

Example of Alignment

CCRS Science Standard: VIII. Physics

D. Mechanical energy: 1. Understand potential and kinetic energy.

TEKS

Grade 6	Integrated Physics and Chemistry	Physics
(8) Force, motion, and energy. The student knows force and motion are related to potential and kinetic energy. The student is expected to: (A) compare and contrast potential and kinetic energy;	(5) Science concepts. The student recognizes multiple forms of energy and knows the impact of energy transfer and energy conservation in everyday life. The student is expected to: (A) recognize and demonstrate that objects and substances in motion have kinetic energy such as vibration of atoms, water flowing down a stream moving pebbles, and bowling balls knocking down pins; (B) demonstrate common forms of potential energy, including gravitational, elastic, and chemical, such as a ball on an inclined plane, springs, and batteries;	(6) Science concepts. The student knows that changes occur within a physical system and applies the laws of conservation of energy and momentum. The student is expected to: (B) investigate examples of kinetic and potential energy and their transformations;

Alignment Charts

- As required by House Bill (HB) 1613, 84th Texas Legislature, Regular Session, 2015, in **January 2016**, the SBOE adopted alignment charts indicating the alignment of the College and Career Readiness Standards (CCRS) and the Texas Essential Knowledge and Skills (TEKS) for mathematics, science, and social studies

- The SBOE will adopt an alignment chart for English language arts and reading following adoption of revisions to the English language arts and reading later this year.

Standards & Assessment

- As standards change, teachers are asked to adjust their practices to incorporate the standards.
- For each set of standards, there is an issue of scope and depth – for students of varying age levels, what breadth of skills should be known, and how well should they be known.
  - This is extremely technical work, and teachers have a job that requires tremendous skill and expertise.
- As standards change, the assessment system has changed to gauge the standards, both the scope & depth.

STAAR

- Assessment program began in 2011–2012 for grades 3-8 and high school
- For high school, twelve EOC subject-area tests (state final exams) replaced ten grade-level tests (campus final exams)
- In 2013, all but five EOC assessments were repealed: Algebra I, biology, English I, English II, and U.S. History

STAAR EOC

Development of STAAR EOC Assessments

- Involved educators through focus groups, advisory committees, and item reviews
- Involved higher education faculty for EOC assessments
- Included the Texas Higher Education Coordinating Board and higher education faculty for EOC assessments

STAAR Post-Secondary Readiness Standards for STAAR Algebra II and English III

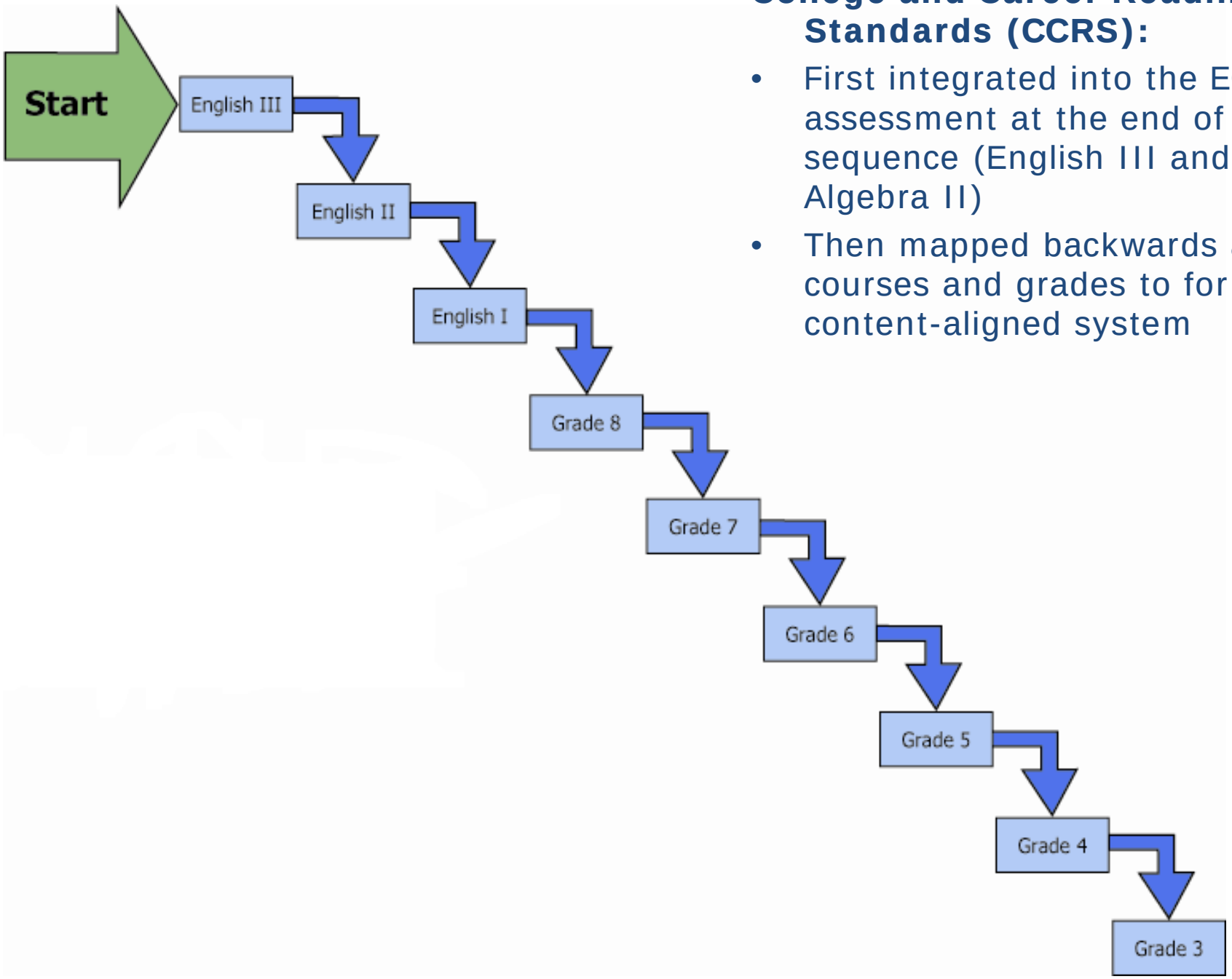
For STAAR EOC development, prior to House Bill (HB) 5, 2013 Regular Texas Legislature, TEC § 39.024 required:

- The setting of **college readiness performance standards** for English III and Algebra II
  - The post-secondary readiness standards were informed by research studies conducted prior to initial standard setting
  - These research studies had to then be conducted at least every three years thereafter
- The comparison of standards to national and international "college readiness" assessments and success in military service or the workforce
- Standards were set before and during the **2011-2012** school year

STAAR Post-Secondary Readiness Standards Operational Definitions: Level II and Level III

- Level II: Satisfactory Academic Performance Operational Definition
  - Students in this category are reasonably likely (with at least a 60% probability) to succeed (with a grade of C or higher) in an entry-level, credit-bearing course in that content area for a baccalaureate degree or associate degree program at a general academic teaching institution or a postsecondary institution that primarily offers associate degrees, certificates, or other credentials.

- Level III: Advanced Academic Performance Operational Definition
  - Students in this category are highly likely (with at least a 75% probability) to succeed (with a grade of C or higher) in an entry-level, credit-bearing course in that content area for a baccalaureate degree or associate degree program at a general academic teaching institution or a postsecondary institution that primarily offers associate degrees, certificates, or other credentials.



College and Career Readiness Standards (CCRS):

- First integrated into the EOC assessment at the end of the sequence (English III and Algebra II)
- Then mapped backwards across courses and grades to form a content-aligned system

Standard-Setting Committee

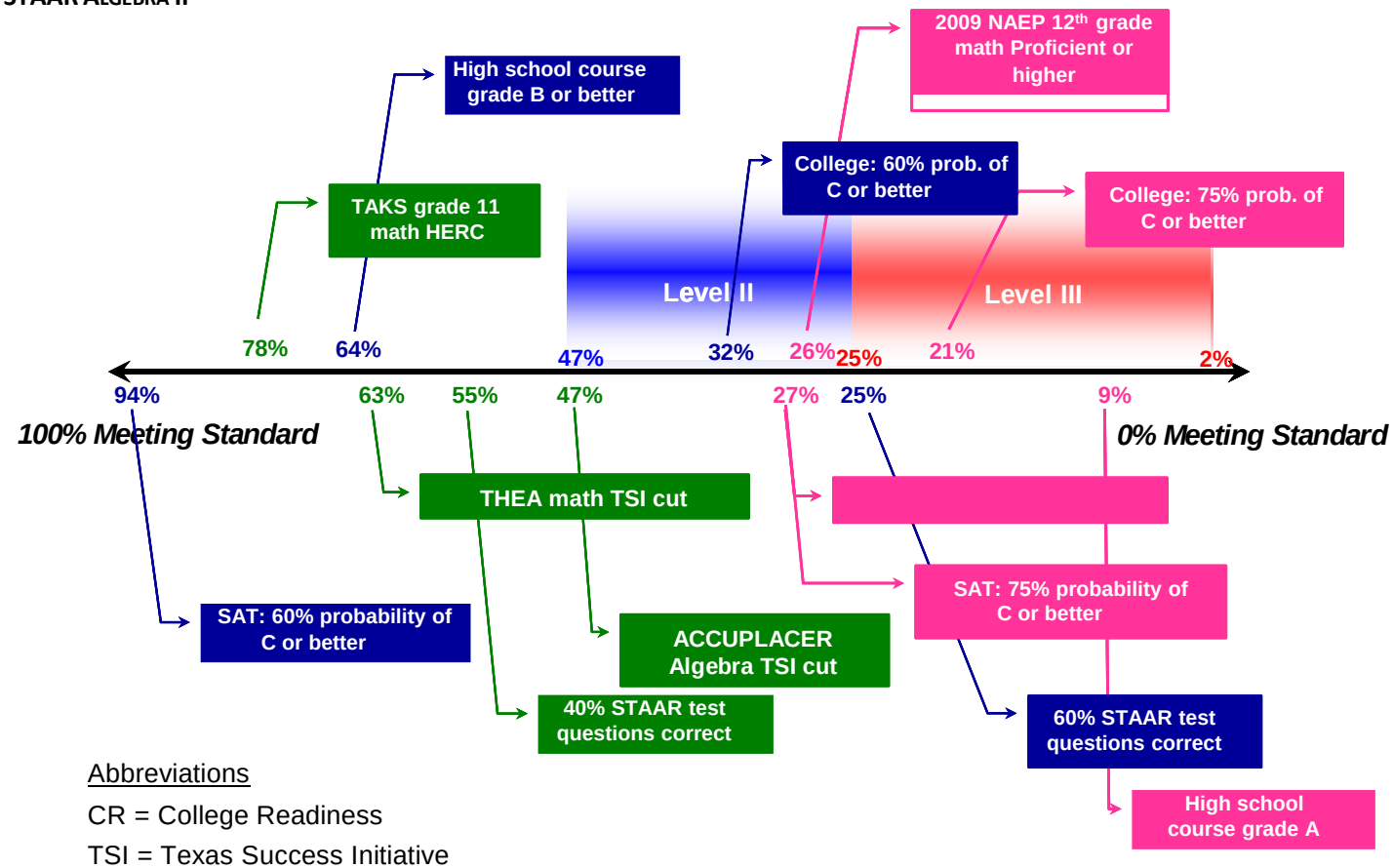
- Committee followed a research-based standard-setting process
- Cut scores were informed by
  - Test content (item difficulty, required skills)
  - Alignment within content area
  - External study results (e.g. SAT, ACT)
  - Linking studies (e.g. Algebra I to Algebra II)
  - Student performance (estimated % passing)
  - Expert judgment
- Cut scores were set starting with highest grade/course, with lower grade/course vertically aligned to higher grade/course
- Higher education faculty were represented on the committee, and THECB participated in the process

STAAR Post-Secondary Readiness Studies

Studies to inform the post-secondary readiness standard:

- Followed students from high school to college
- Compared EOC performance and other test performance
  - SAT
  - ACT
  - ACCUPLACER
  - THEA

STAAR ALGEBRA II

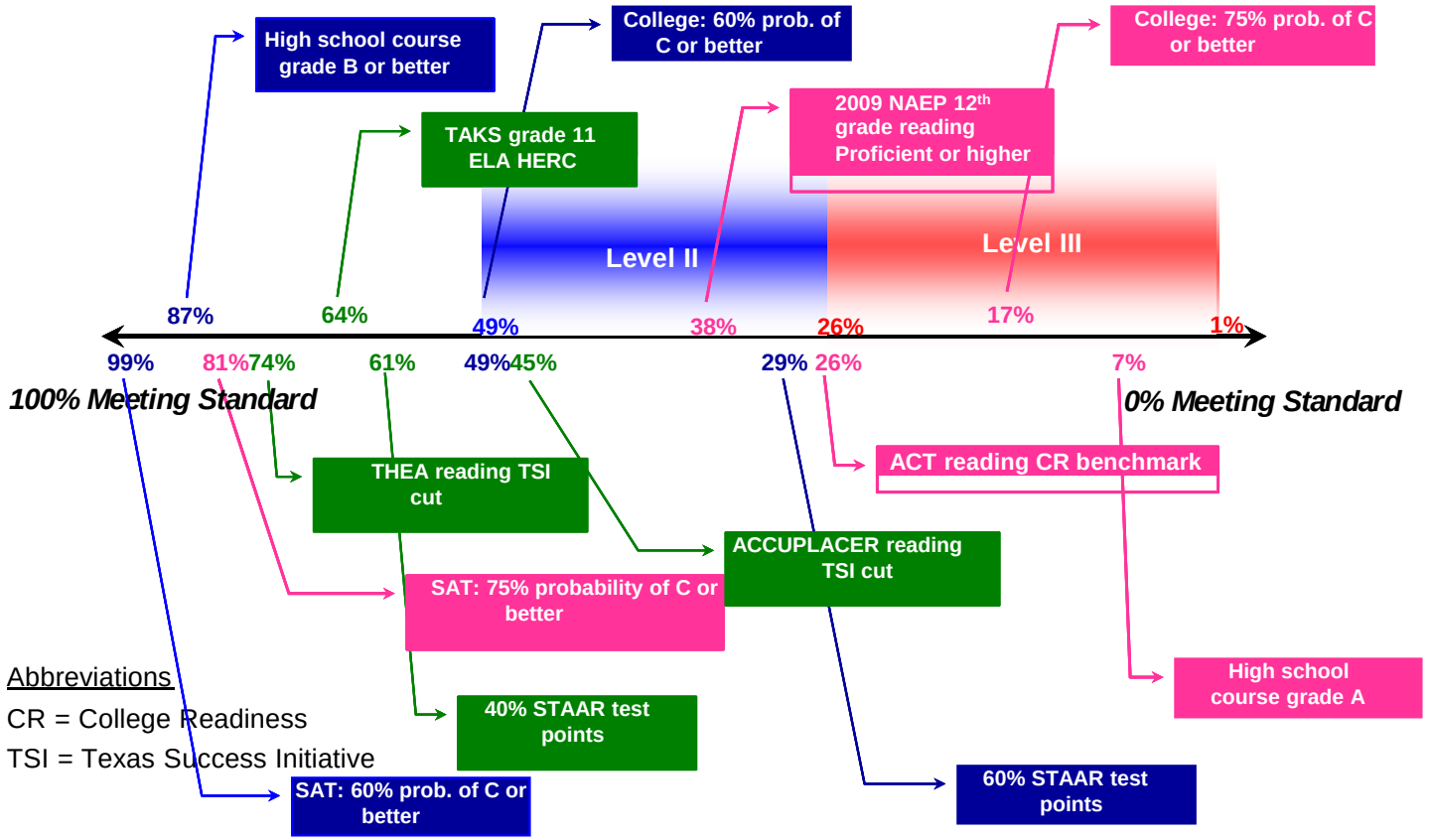


Abbreviations

CR = College Readiness

TSI = Texas Success Initiative

STAAR ENGLISH III READING

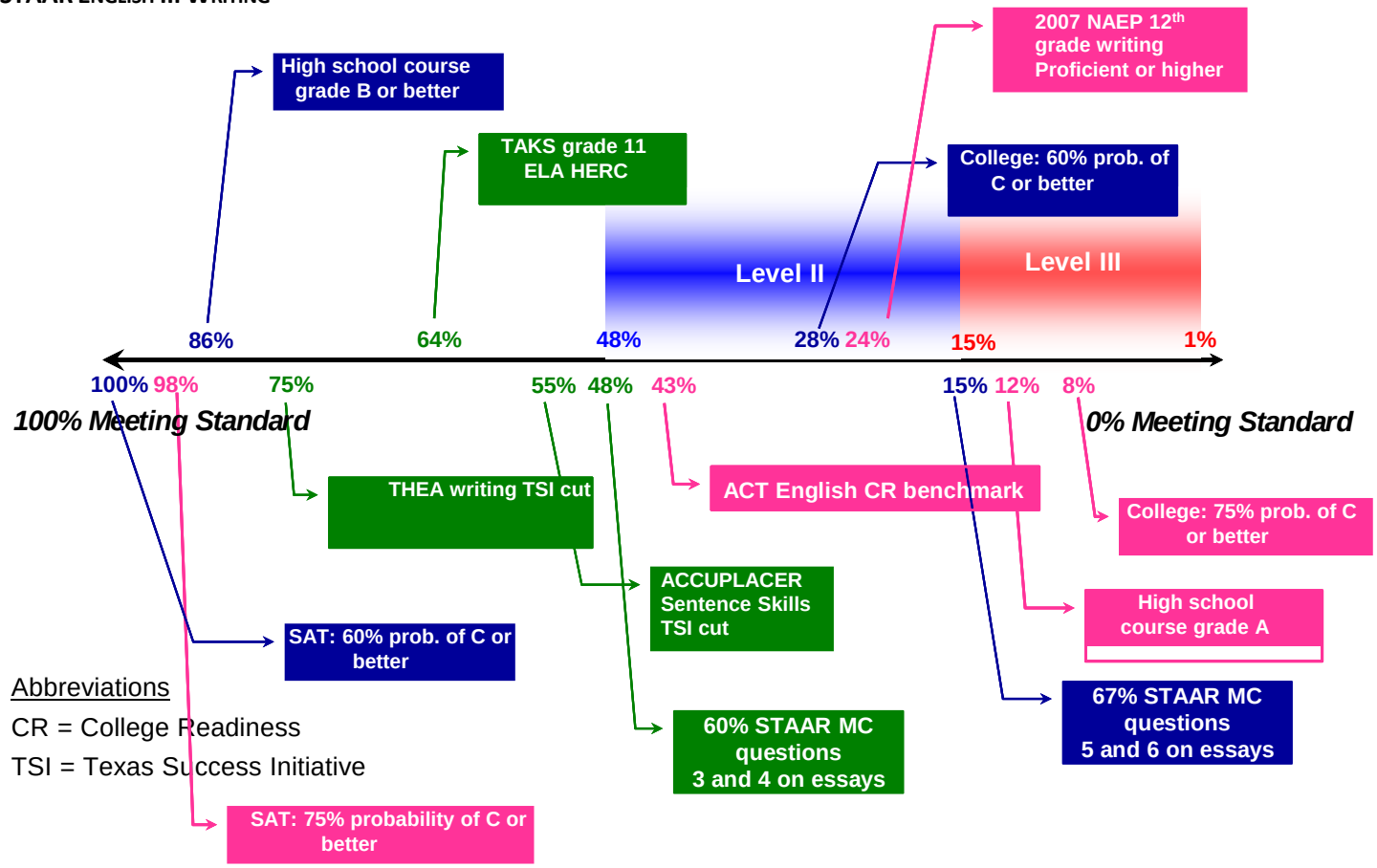


Abbreviations

CR = College Readiness

TSI = Texas Success Initiative

STAAR ENGLISH III WRITING



Abbreviations

CR = College Readiness

TSI = Texas Success Initiative

Performance Standards

- STAAR EOC performance standards set March 2012
- The Algebra II and English III post-secondary readiness performance standards were approved by commissioner of education and commissioner of higher education
  - The **post-secondary readiness standard** was set at the Final Recommended Level II performance standard
- All other performance standards (Phase In Level II) approved by commissioner of education

Summary

The STAAR Assessment Program features:

- Content and performance standards that were an aligned system from grade 3 to career and college readiness to prepare all students for postsecondary opportunities
- Performance standards that were not set in isolation but informed by data from research studies that included comparisons with national and international assessments
- A multi-step research-based standard-setting process that included diverse stakeholders from higher and public education and involves frequent review of standards

STAAR Algebra II and English III

- STAAR Algebra II and English III were suspended during the 2013-2014 and 2014-2015 school years. These assessments are now optional beginning with the 2015-2016 school year. A district is required to assess all eligible students in that subject area if the district chooses to participate in either administration.
- STAAR Algebra II and English III results may not be used for:
  - Accountability
  - Teacher evaluations
  - Course grades
  - Class rank
  - IHE admission purposes

STAAR Algebra II and English III

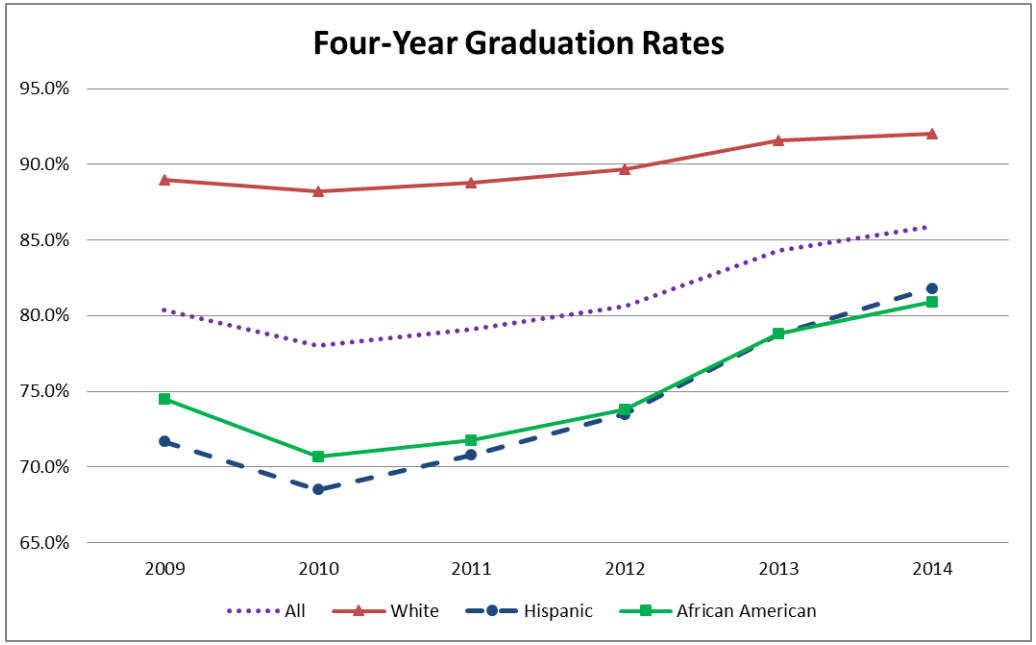
- STAAR Algebra II and English III reading and writing results for spring 2013:
  - 93,135 students were tested in Algebra II
    - 77% met the Final Recommended Level II (post-secondary) readiness standard
  - 24,207 students were tested in English III Reading
    - 47% met the Final Recommended Level II (post-secondary) standard
  - 25,909 students were tested in English III Writing
    - 24% met the Final Recommended Level II (post-secondary) readiness standard

- STAAR Algebra II and English III registration for spring 2016:
  - 88 districts
  - Algebra II: 20,597 students
    - 2,518 will take the online assessment
  - English III: 17,281 students
    - 2,396 will take the online assessment

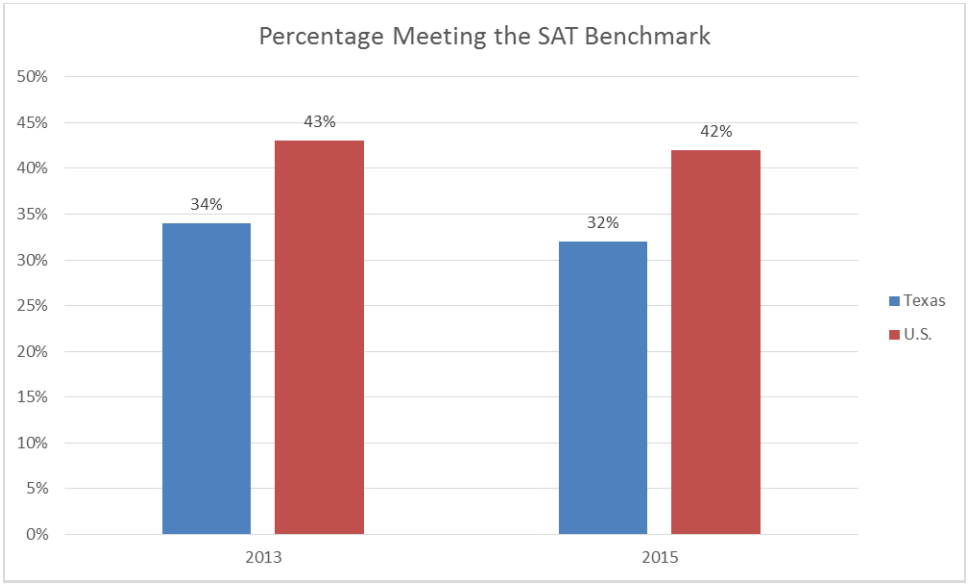
Career and College Readiness and Outcomes

- Career and College Readiness
  - Graduation Rates
  - SAT/ACT
  - AP Performance
  - TSI Requirements
- Career and College Outcomes
  - College Enrollment

Four-Year Graduation Rates, by Race/Ethnicity, Texas Public Schools

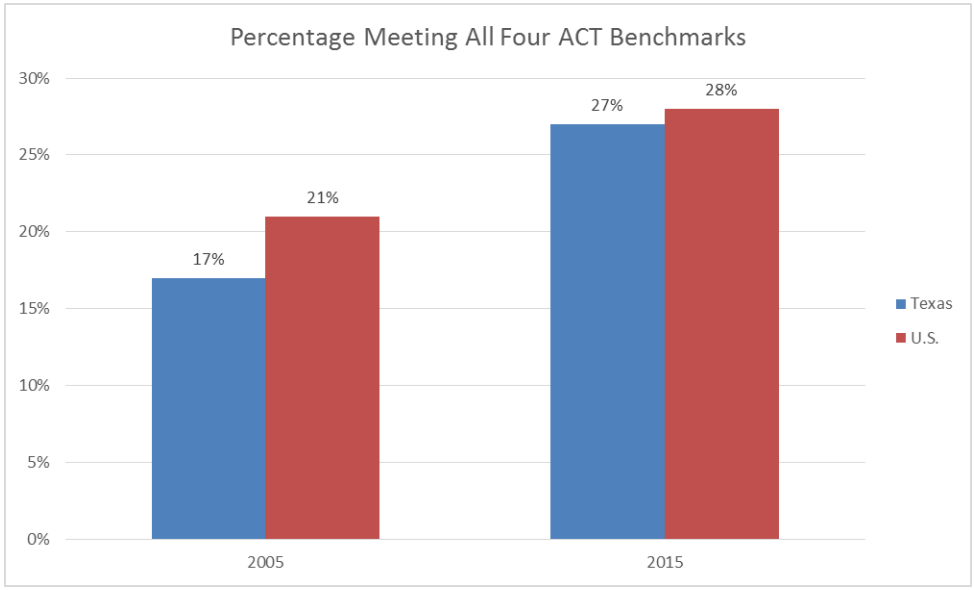


Percent of Texas Students Meeting the SAT Benchmark Score as Compared to the Nation



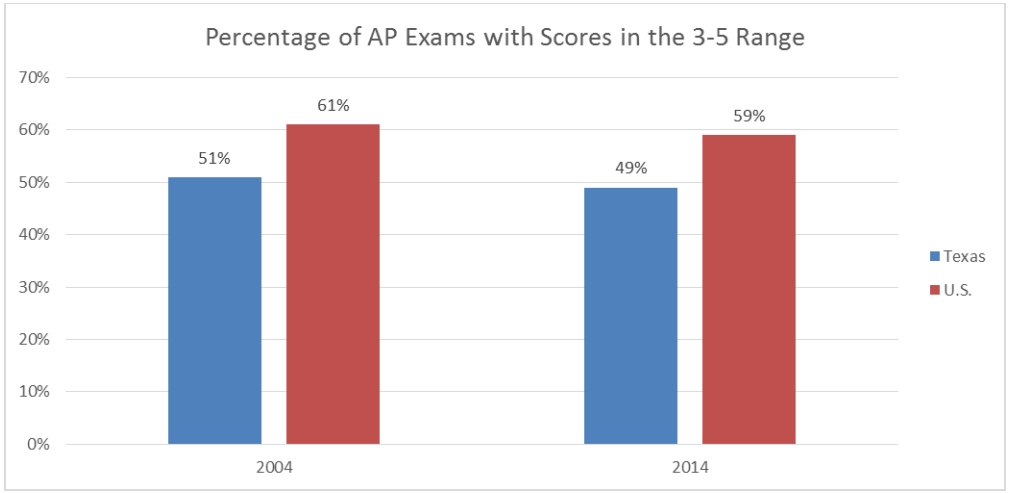
Note: National comparisons on SAT data use results from public and non-public schools. The SAT benchmark is a score of 1550 (critical reading, math and writing sections combined).

Percent of Texas Students Meeting All Four ACT Benchmark Scores as Compared to the Nation



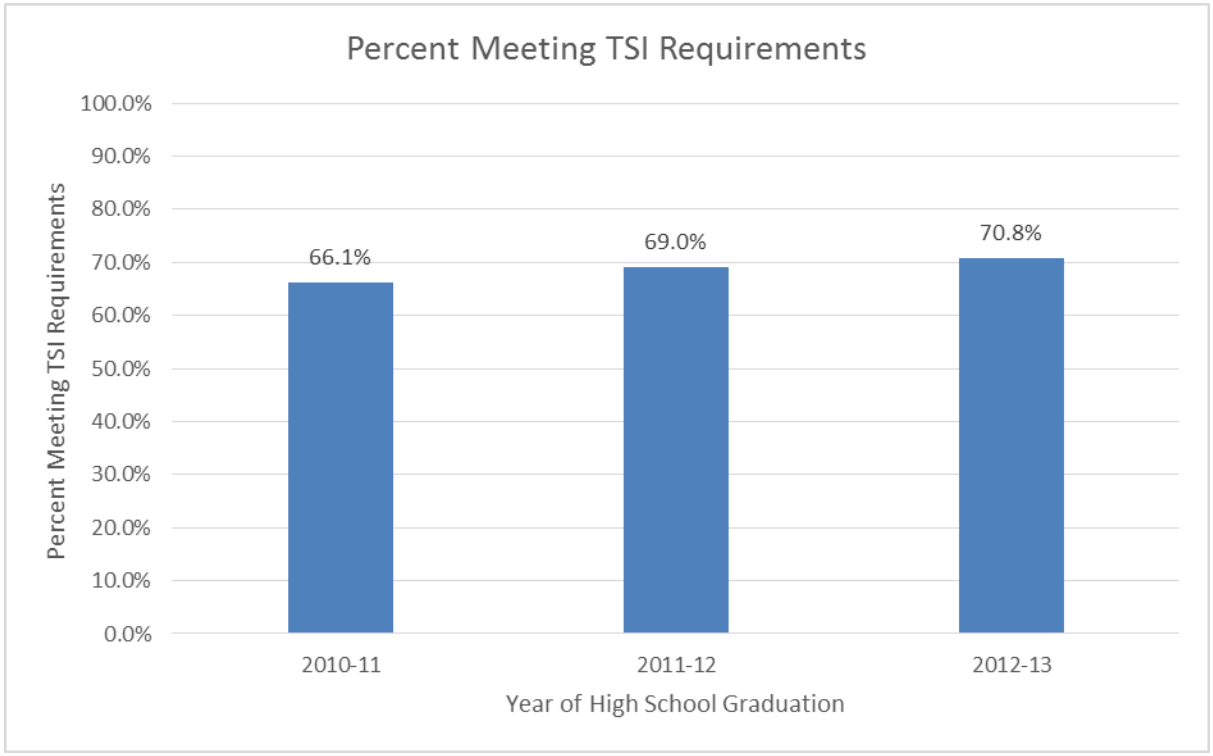
Note: National comparisons on ACT data use results from public and non-public schools. The 2015 ACT benchmark scores were English=18, Math=22, Reading=22, and Science=23.

Percent of Advanced Placement Exams With Scores in the 3-5 Range: Texas and the U.S.



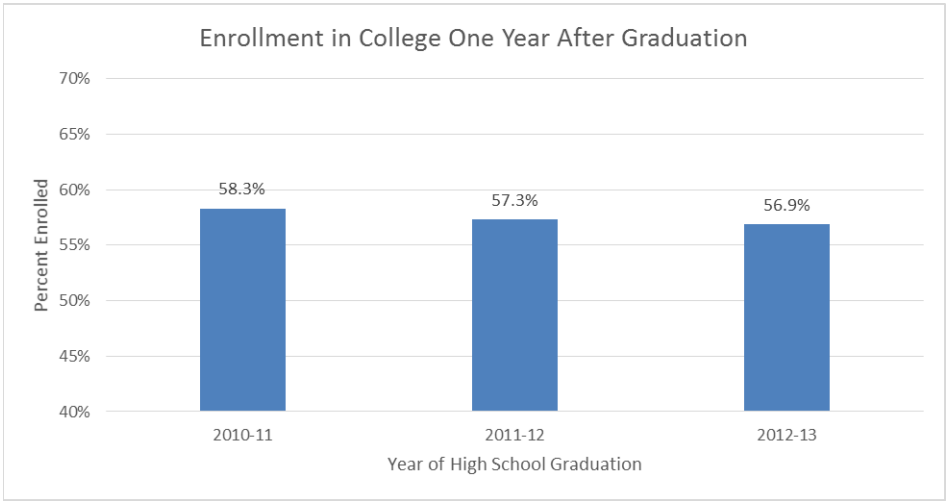
Note: National comparisons on AP data use results from public and non-public schools.

Percent of College Enrollees Meeting Texas Success Initiative Requirements



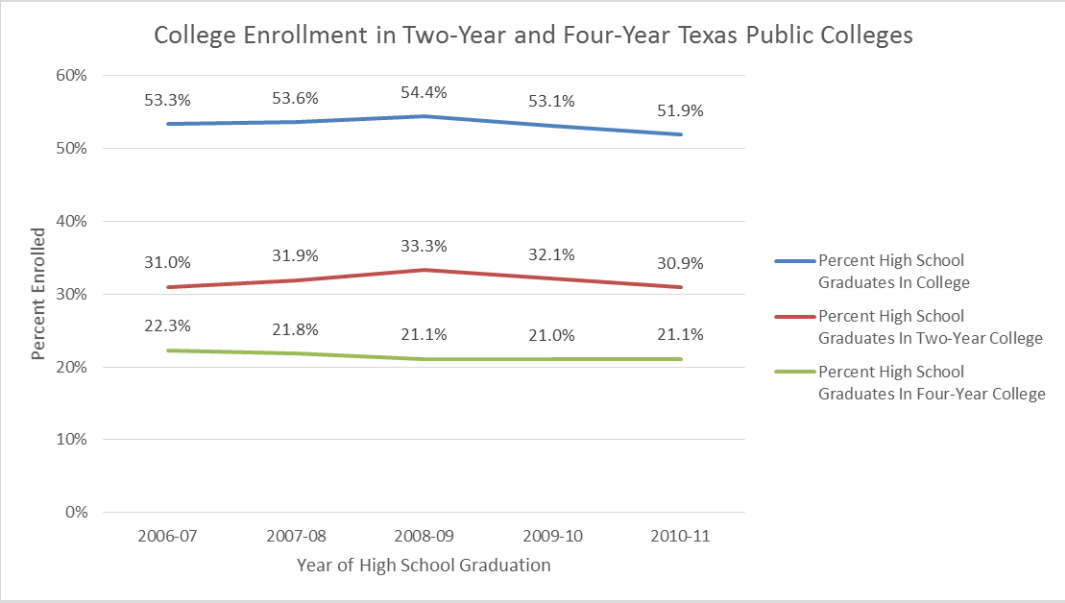
Note: The figure reflects Texas public school graduates enrolling in Texas public institutions of higher education. TSI requirements apply only to Texas public institutions.

Percent Enrolled in College One Year After High School Graduation Using Texas Public and Non-Public Institutions of Higher Education Data



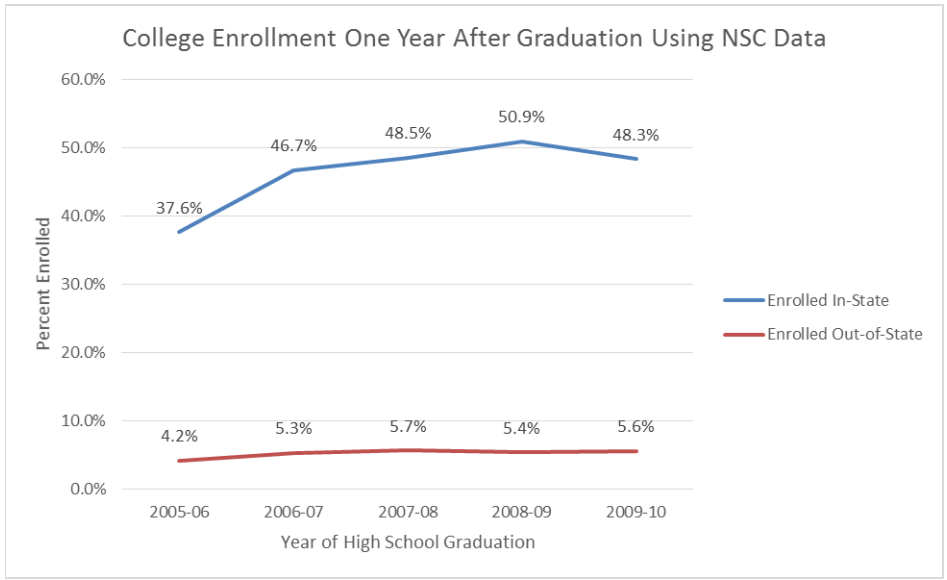
Note: Results are from THECB and reflect enrollment of Texas public high school graduates in Texas public and non-public institutions of higher education.

Percent Enrolled in College One Year After High School Graduation by Institution Type Using Texas Public Institutions of Higher Education Data



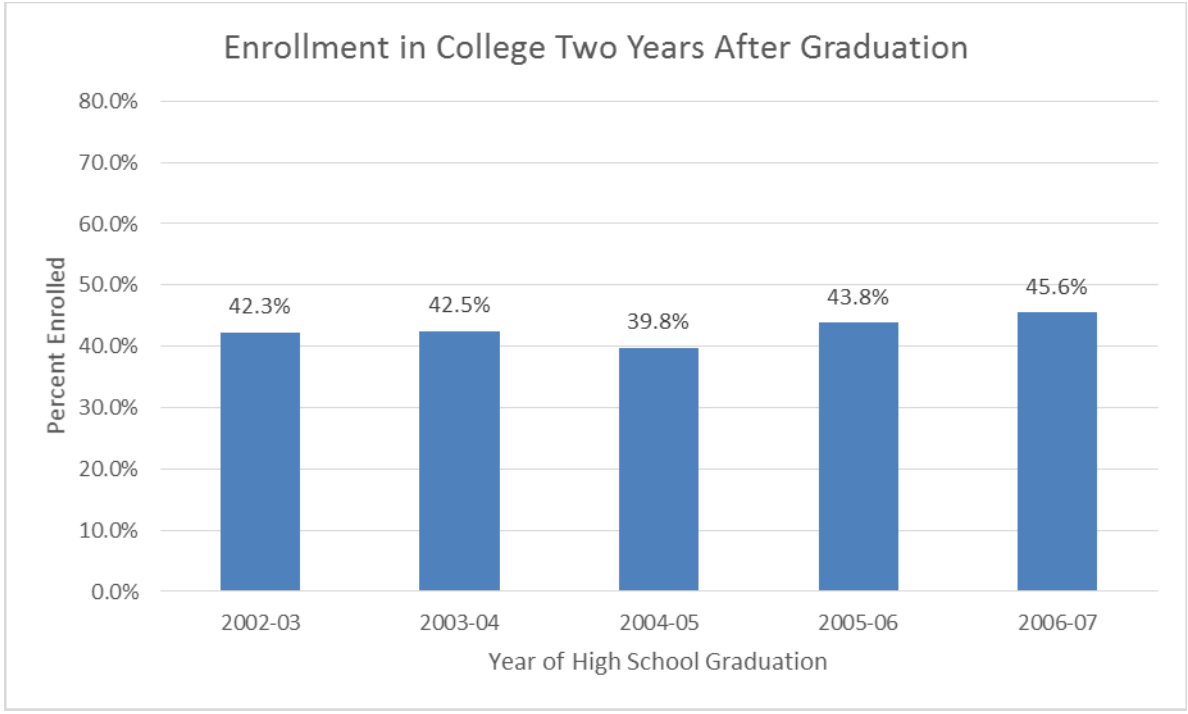
Note: These data reflect enrollment of Texas public high school graduates in Texas public institutions of higher education only.

College Enrollment One Year After High School Graduation Using NSC Data



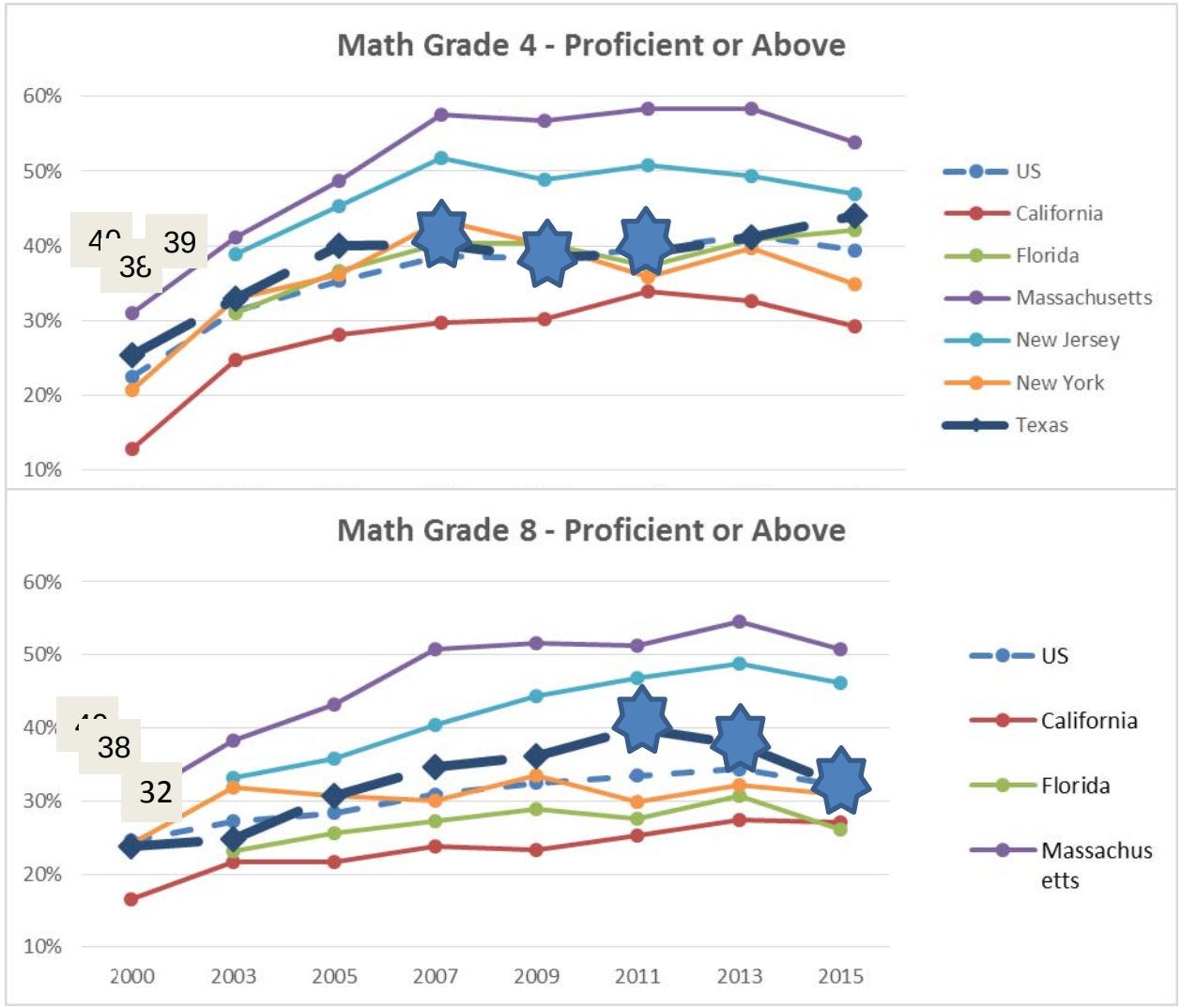
Note: NSC = National Student Clearinghouse. These data reflect enrollment of Texas public high school graduates in in-state and out-of-state public and independent institutions of higher education.

College Persistence: Percent Enrolled in College Two Years After High School Graduation Using NSC Data



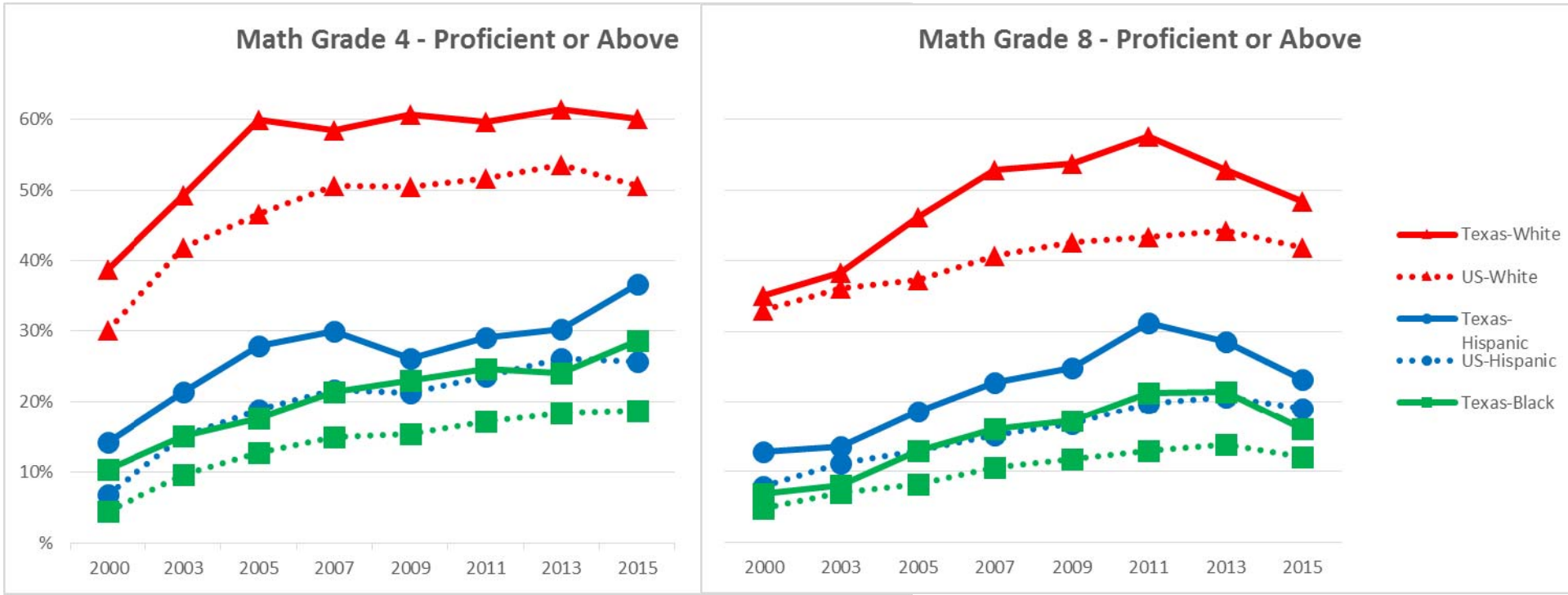
Note: NSC = National Student Clearinghouse. These data reflect enrollment of Texas public high school graduates in in-state and out-of-state public and independent institutions of higher education.

STAAR Post-Secondary Readiness standard (Final Level II)
very similar to **NAEP Proficiency**



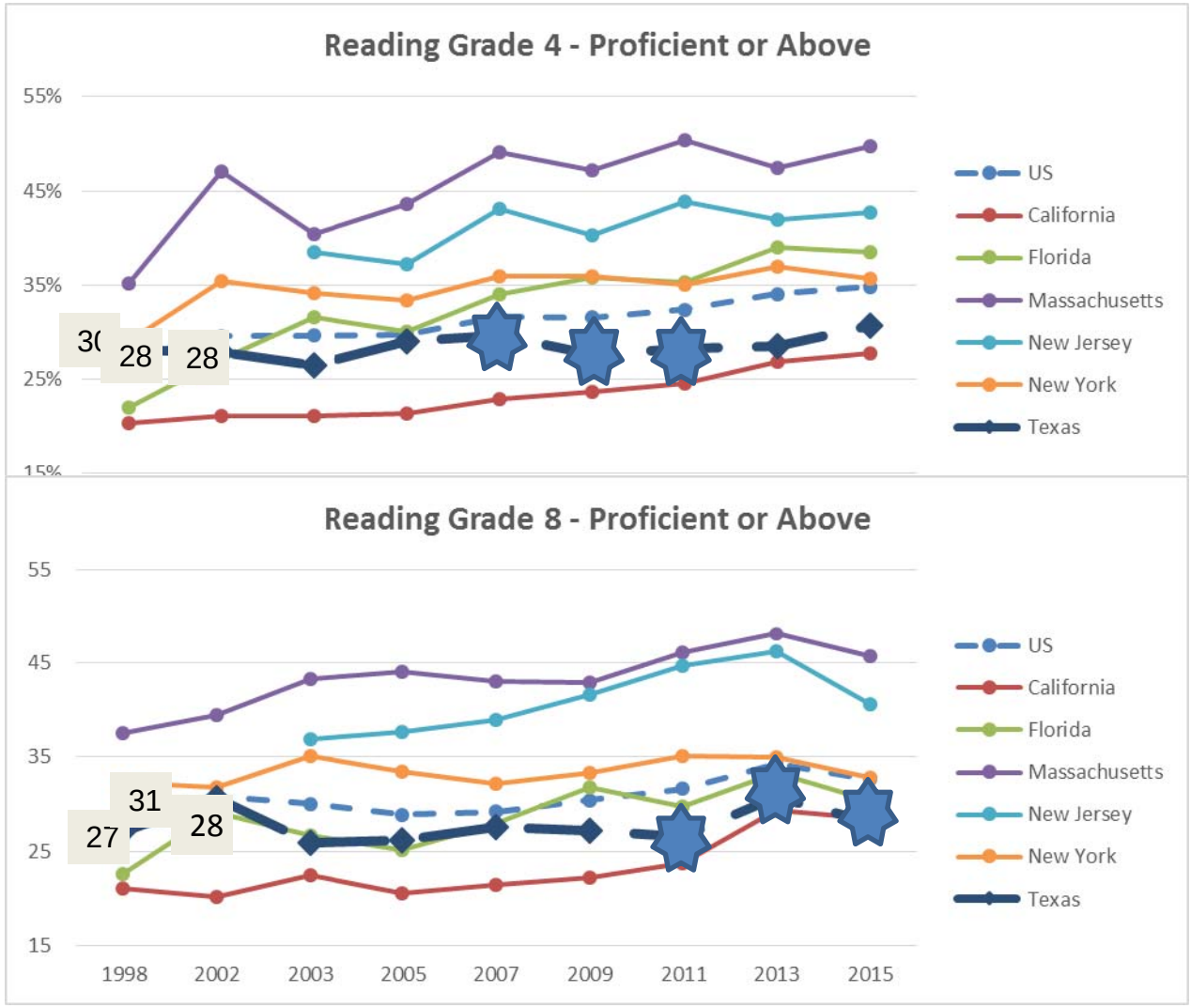
Mathematics

NAEP Proficiency Rates
for selected states
and the US



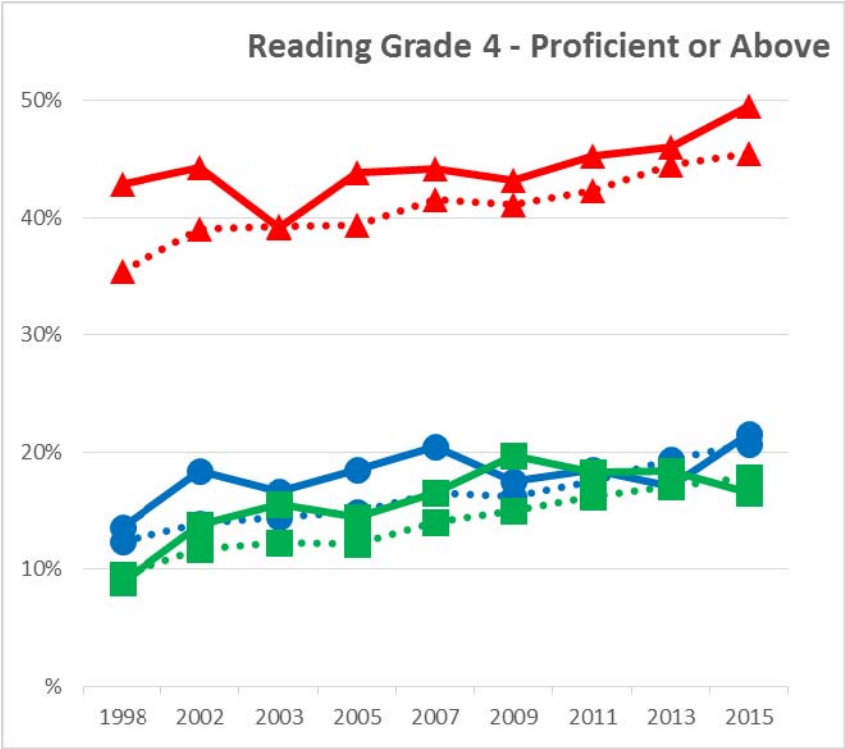
Mathematics

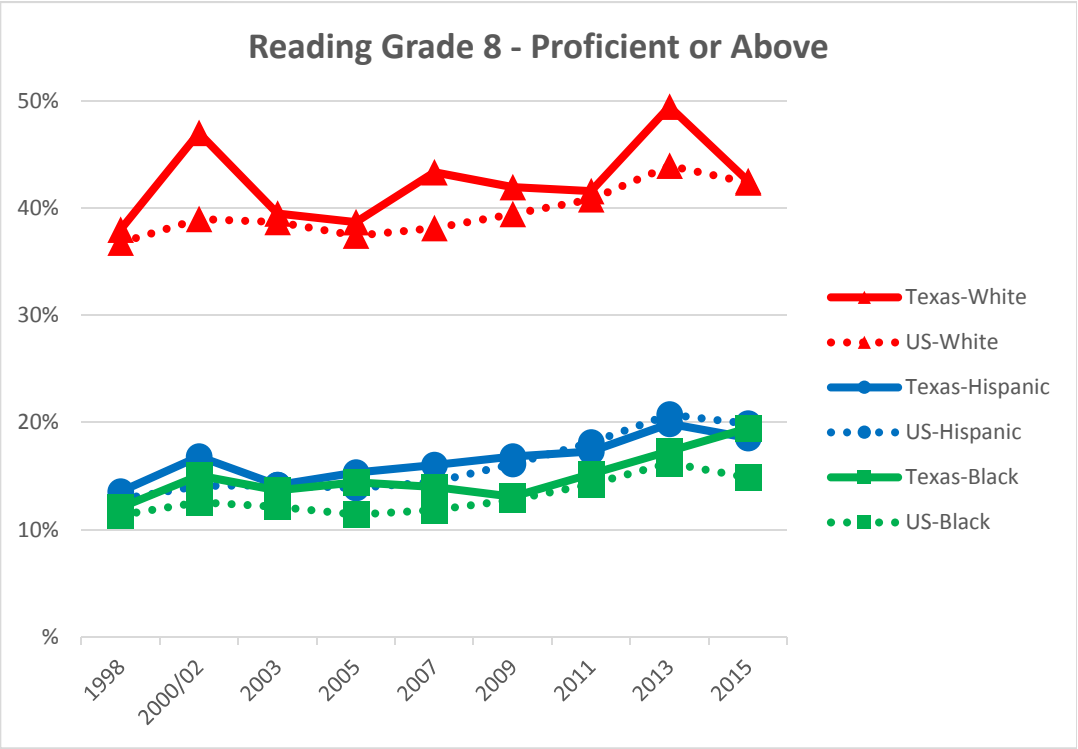
NAEP Proficiency Rates
by major ethnic subpopulation
for Texas and US



Reading

NAEP Proficiency Rates
for selected states
and the US





Reading

NAEP Proficiency Rates
by major ethnic subpopulation
for Texas and US