

College Admissions Testing General Information, Class of 2018

College Admissions Testing: The SAT and ACT

Introduction

The SAT and ACT examinations are designed to measure students' college readiness and academic achievement as they prepare for postsecondary college and career opportunities. Most U.S. colleges and universities take into consideration some combination of college admissions test scores and school achievement records when making decisions about admissions and course placement. The SAT is based on the high school curriculum and measures examinees' preparedness for college with an emphasis on the reasoning, knowledge, skills, and understanding that are most important for college and career readiness (College Board, 2017a). The ACT is based on the high school curriculum and measures examinees' academic readiness for college in key content areas and assesses student mastery of both college and career readiness standards (ACT, Inc., 2017). The College Board develops the SAT with guidance from test development committees made up of experienced educational professionals and subject-matter experts (College Board, 2017a). ACT, Inc., develops the ACT using a range of information, including state curriculum frameworks, state-adopted textbooks, surveys of college faculty, and consultation with educational experts at the secondary and postsecondary levels (ACT, Inc., 2017). All test questions on both the SAT and ACT are subjected to independent review processes and pretested on students under live testing conditions (ACT, Inc., 2017; College Board, 2017a).

This document supplements the following reports: *College Admissions Testing Results for Graduating Seniors in Texas Public Schools, Class of 2018* (Texas Education Agency [TEA], 2020b) and *College Admissions Testing Results for Graduating Seniors in Texas and the United States, Class of 2018* (TEA, 2019a). It provides background information on the SAT and ACT examinations, including descriptions of the examinations, uses of individual scores in Texas, data sources, and interpretation of results.

The Examinations

SAT. The College Board began administering a redesigned version of the SAT in March 2016. The redesigned version of the SAT consists of two sections: evidence-based reading and writing (ERW) and mathematics (Table 1 on page 2) (College Board, 2017a). The ERW section is 1 hour, 40 minutes

Table 1
A Brief Comparison of the SAT and ACT Examinations, 2017-18

| Characteristic | SAT | ACT |
|----------------|---|---|
| Type of test | The SAT is a curriculum-based, college readiness test that assesses the academic skills and knowledge students acquire in high school and the ability to apply that knowledge. | The ACT is a curriculum-based, college and career readiness test that assesses what students learn in their classes; similar to an achievement test. |
| Test structure | Evidence-based reading and writing (2 sections) Mathematics (2 sections) Includes experimental test questions on selected tests Essay (1 optional section) | English (1 section) Mathematics (1 section) Reading (1 section) Science (1 section) Includes experimental test questions on selected tests Writing (1 optional section) |
| Test content | <p><u>Evidence-based reading and writing</u> Passage-based reading with multiple-choice questions measuring ability to:</p> <ul style="list-style-type: none"> analyze and synthesize information comprehend what is stated or implied understand vocabulary in context recognize and correct errors in: <ul style="list-style-type: none"> content rhetoric mechanics <p>Multiple-choice sentence completion questions measuring ability to:</p> <ul style="list-style-type: none"> understand vocabulary understand sentence structure <p><u>Mathematics</u> Multiple-choice and student-produced responses (grid-in) questions covering four content areas:</p> <ul style="list-style-type: none"> algebra and functions advanced expressions problem solving and data analysis geometry and trigonometry <p><u>Essay (optional)</u> Essay test measuring:</p> <ul style="list-style-type: none"> reading comprehension argument analysis writing skills | <p><u>English</u> Passage-based reading with multiple-choice questions measuring understanding of:</p> <ul style="list-style-type: none"> usage/mechanics: <ul style="list-style-type: none"> punctuation grammar and usage sentence structure rhetorical skills: <ul style="list-style-type: none"> topic development organization style <p><u>Mathematics</u> Multiple-choice questions covering six content areas:</p> <ul style="list-style-type: none"> pre-algebra elementary algebra intermediate algebra geometry trigonometry statistics and probability <p><u>Reading</u> Passage-based reading with multiple-choice questions measuring reading comprehension as a function of referring and reasoning skills, including understanding of vocabulary in context</p> <p><u>Science</u> Presents data representations, research summaries, and conflicting viewpoints with multiple-choice questions measuring ability to understand, analyze, and generalize scientific information from biology, chemistry, earth/space sciences, and physics</p> <p><u>Writing (optional)</u> Essay test measuring writing skills emphasized in high school English classes and in entry-level college composition courses</p> |

Note. Information contained in this table was compiled and summarized from resources available from ACT, Inc., and College Board, including ACT, Inc. (n.d.-b, 2017) and College Board (2017a, 2017b, 2017c).

^aNot including the experimental questions.

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Table 1 (continued)
A Brief Comparison of the SAT and ACT Examinations, 2017-18

| Characteristic | SAT | ACT |
|-------------------------------|--|---|
| Length | 154 items: 3 hours ^a Optional essay: 50 minutes | 215 items: 2 hours, 55 minutes ^a Optional writing section: 40 minutes |
| Penalty for incorrect answers | No penalty | No penalty |
| Scoring | The score on each of the two major sections ranges from 200 to 800 (in 10-point increments). The optional essay section has three subscores, each ranging from 2 to 8. | The score on each of the four major sections ranges from 1 to 36. The composite score is the average of the four section scores rounded to the nearest whole number. The optional writing section score, ranging from 2 to 12, is the average of four subscores, each ranging from 2 to 12. |
| Score reporting | If a student takes the test multiple times, he or she can choose which scores to have sent to colleges. | If a student takes the test multiple times, he or she can choose which scores to have sent to colleges. |
| Cost of exam | \$46 plus an additional \$14 for the optional essay section | \$46 plus an additional \$16.50 for the optional writing section |

Note. Information contained in this table was compiled and summarized from resources available from ACT, Inc., and College Board, including ACT, Inc. (n.d.-b, 2017) and College Board (2017a, 2017b, 2017c).

^aNot including the experimental questions.

in length and consists of a reading test and a writing and language test. The reading test consists of 52 multiple-choice passage-based questions that assess understanding of vocabulary in context; ability to analyze and synthesize information; and ability to comprehend what is explicitly stated, as well as what is implied, in text passages. The writing and language test consists of 44 multiple-choice questions that assess ability to recognize and correct content-related, rhetorical, or mechanical errors in passages. The sentence completion questions assess vocabulary and understanding of sentence structure. The reading test is 1 hour, 5 minutes in length and the writing and language test is 35 minutes in length. The ERW items are categorized according to four content areas: expression of ideas, standard English conventions, relevant words in context, and command of evidence.

The mathematics section is 1 hour, 20 minutes in length (College Board, 2017a). This section consists of 58 multiple-choice questions and student-produced response questions that assess skills in solving problems, modeling, using appropriate tools strategically, and using structure to solve algebra and other advanced mathematics problems. The mathematics items are categorized according to four content areas: algebra and functions, advanced expressions, problem solving and data analysis, and geometry and trigonometry.

The optional essay section is 50 minutes in length (College Board, 2017a). This section consists of a student-produced essay requiring students to provide a written analysis of an excerpt in response to a prompt using the conventions of standard written English. The essay assesses skills in reading comprehension, argument analysis, and writing.

The redesigned version of the SAT was first administered to examinees in March 2016 (College Board, 2017a). The structure of the previous version of the SAT differs from the redesigned version in that: (a) the reading and writing tests were in separate sections called critical reading and writing, respectively; (b) the essay section was mandatory and part of the writing section; and (c) the mathematics

section did not focus as heavily on algebra, problem solving, and data analysis (College Board, 2015). The testing time for the redesigned SAT is 3 hours, not including the optional essay or examinations with experimental questions (College Board, 2017c). Testing time is extended by 20 minutes when experimental questions, which are designed to pretest questions for future tests and are presented to a sample of examinees, are presented.

ACT. The ACT consists of five sections: English, mathematics, reading, science, and an optional writing section (ACT, Inc., 2017). The English section is 45 minutes in length and consists of 75 multiple-choice passage-based questions that assess understanding of the conventions of standard written English and of rhetorical skills. Specifically, the six elements assessed by this section are punctuation, grammar and usage, sentence structure, topic development, organization, and style.

The mathematics section is 1 hour in length and consists of 60 multiple-choice questions that assess mathematical reasoning skills in the areas of pre-algebra, elementary algebra, intermediate algebra, geometry, trigonometry, and statistics and probability (ACT, Inc., 2017). The mathematics items are reported according to three main categories: preparing for higher mathematics, integrating essential skills, and modeling.

The reading section is 35 minutes in length and consists of 40 multiple-choice questions that assess reading comprehension by requiring examinees to understand what is explicitly stated, as well as what is implied, in text (ACT, Inc., 2017). Specific skills assessed include the ability to determine main ideas, locate and interpret significant details, understand sequences of events, make comparisons, comprehend cause-effect relationships, use context to understand vocabulary, draw generalizations, and analyze voice and method. The reading items are reported according to three categories: key ideas and details, craft and structure, and integration of knowledge and ideas.

The science section is 35 minutes in length and consists of 40 multiple-choice questions that assess skills required in the sciences, including interpretation, analysis, evaluation, reasoning, and problem solving (ACT, Inc., 2017). The content includes biology, chemistry, earth/space sciences, and physics. The science items are constructed in three formats: data representation, requiring examinees to interpret graphs and information presented in tables and diagrams; research summaries, requiring examinees to interpret experimental results; and conflicting viewpoints, requiring examinees to understand, analyze, and compare alternative viewpoints or hypotheses.

The optional writing section is 40 minutes in length and requires each examinee to write an essay, based on a prompt, presenting a position on an issue (ACT, Inc., 2017). The prompt describes an issue and provides three different perspectives on the issue. Examinees are asked to support one of the three perspectives or to develop a response based on their own perspective and analyze the relationship between their perspective and one or more of the others. The writing section measures writing skills emphasized in high school English classes and in entry-level college composition courses.

The testing time for the ACT is 2 hours, 55 minutes, not including the optional writing section or examinations with experimental questions. Experimental questions are designed to pretest questions and are administered to a sample of examinees.

SAT and ACT Scoring

SAT. Student performance on the SAT is reported as a scaled score, which is a normative standard score calculated from a raw score (College Board, 2017a). The SAT scaled scores on each section range from 200 to 800 in 10-point increments. In contrast to the previous version of the SAT, no points are deducted for incorrect answers. The ERW section scale score is derived from two raw subscores from a reading test and a writing and language test. Each examinee receives a total scale score, ranging from 400 to 1600, calculated as the sum of that examinee's ERW and mathematics scores.

Students may take the SAT more than once. For the class of 2017 and earlier classes, TEA based performance results on each examinee's most recent test. For the class of 2018, TEA based performance results on each examinee's best section scores across all tests taken. Those scores were used, in turn, to calculate SAT total scores. An examinee's best scores on the ERW and mathematics sections were summed to calculate the examinee's SAT total score. These total scores are commonly known as "superscores." Because of the change in how class of 2018 examinee scores were calculated, performance results for the class of 2018 are not comparable to results for earlier classes.

Prior to March 2016, when the College Board began administering the redesigned version of the SAT, scaled scores on each section of the test ranged from 200 to 800 in 10-point increments (College Board, 2014). For the critical reading and mathematics sections, the raw score equaled the number of questions answered correctly minus one-quarter of the number of multiple-choice questions answered incorrectly. No points were deducted for unanswered questions or for wrong answers to student-produced response questions on the mathematics section. The writing scaled score was derived from: (a) a raw score calculated in the same manner as the critical reading and mathematics sections and (b) the essay score, which was the sum of two readers' scores. The essay made up approximately 30 percent of the total writing score. The total scale score ranged from 600 to 2400.

Scores for the redesigned SAT and its predecessor are not equivalent because the examinations are different in content, structure, and scoring. Only 0.1 percent of class of 2018 SAT examinees either took the previous version of the SAT, rather than the redesigned version, or took both versions and scored higher on the previous version. Scores for students who took the previous version of the SAT were converted to scores comparable to those for the redesigned version of the test using the College Board's concordance tables. This made it possible to determine the best scores across the two versions of the test and to summarize data for the class of 2018 SAT examinee population as a whole for the report *College Admissions Testing Results for Graduating Seniors in Texas Public Schools, Class of 2018* (TEA, 2020b). The College Board created the concordance tables by calculating percentile ranks of score and subscore distributions on each section and combination of sections on both versions of the SAT (College Board, 2016). Scores for the two versions of the test are concorded when they have the same percentile ranks.

For class of 2018 examinees who took the previous version of the SAT, the best scores for each section were converted to corresponding scores on the redesigned version using the College Board's concordance tables. Scores for the mathematics section of the previous version of the test were converted to corresponding scores for the mathematics section of the redesigned version. In addition, combined scores for multiple sections of the previous version of the test were converted to corresponding scores

on the redesigned version. To calculate an examinee's best ERW section score: (1) the examinee's best scores for the critical reading and writing sections of the previous version of the test were summed; then (2) the summed scores were converted to corresponding scores for the ERW section of the redesigned version. To calculate an examinee's total score, or combined ERW and mathematics score: (1) the examinee's best scores for the critical reading, writing, and mathematics sections of the previous version of the test were summed; then (2) the summed scores were converted to corresponding scores for the combined ERW and mathematics score on the redesigned version. To determine the total scores for examinees who took both versions of the test, each examinee's converted total score was then compared to that examinee's total score on the redesigned SAT. An examinee's best section scores were taken from the version of the test with the highest total score. Because scores for the combined ERW and mathematics measure were converted separately from the individual test sections, sums of section mean scores may not always equal the mean scores of the combined measure.

ACT. Student performance on the ACT is reported as a scaled score that ranges from 1 to 36 in 1-point increments (ACT, Inc., 2017). For the English, mathematics, reading, and science sections of the ACT, the raw score equals the number of questions answered correctly; no points are deducted for incorrect answers. Examinees also receive a composite score, calculated as the average of each examinee's English, mathematics, reading, and science scores rounded to the nearest whole number.

Students may take the ACT more than once. For the class of 2017 and earlier classes, TEA based performance results on each examinee's most recent test. For the class of 2018, TEA based performance results on each examinee's best section scores across all tests taken. Those scores were used, in turn, to calculate ACT composite scores. An examinee's best English, mathematics, reading, and science section scores were averaged to calculate the examinee's ACT composite score. These composite scores are commonly known as "superscores." Because of the change in how class of 2018 examinee scores were calculated, performance results for the class of 2018 are not comparable to results for earlier classes.

Because the SAT and ACT may vary in difficulty from test form to test form or from year to year, the raw scores are not comparable. To allow for performance comparisons, the raw scores are converted to scaled scores. The statistical equating procedures used in the conversion ensure that any given scaled score indicates the same level of ability across test forms or testing dates.

Use of Individual SAT and ACT Scores in Texas

Texas Public School Accountability System

The Texas public school accountability system evaluates the performance of districts and campuses in three domains: Student Achievement, School Progress, and Closing the Gaps (Texas Education Agency [TEA], 2019b; Texas Education Code [TEC], Chapter 39, Subchapter G, 2019). For the 2019 accountability ratings cycle, districts and campuses received overall accountability ratings of *A-F* based on results across a number of indicators in the three domains. Performance on the SAT and the ACT was a component of the college, career, and military readiness (CCMR) indicators, which were included in all three domains.

College, Career, and Military Readiness Indicators

The CCMR indicators in the Texas public school accountability system use performance data from the ACT, Advanced Placement, International Baccalaureate, SAT, and Texas Success Initiative (TSI) assessments, among other data, to measure students' preparedness for college, the workforce, or the military (TEA, 2019b). There are two CCMR indicators in the accountability system: one for the Student Achievement and School Progress domains and one for the Closing the Gaps domain. Performance on the SAT and the ACT is included in both CCMR indicators as a component of the TSI criteria. For the 2019 accountability ratings cycle, the CCMR indicator for the Student Achievement and School Progress domains measured the percentage of 2018 annual graduates who met the TSI criteria in both English language arts (ELA) and mathematics, and the CCMR indicator for the Closing the Gaps domain measured the percentage of 2018 annual graduates plus students in Grade 12 in the 2017-18 school year who met the TSI criteria in both ELA and mathematics. The SAT/ACT components of the CCMR indicators were evaluated based on data for the class of 2018.

Distinction Designations

Overview. Under the Texas public school accountability system, distinction designations are awarded to recognize school districts and campuses for outstanding achievement in specified academic areas (TEA, 2019b; TEC, Chapter 39, Subchapter G, 2019). The distinction designations are based on results across a number of indicators. Results for a campus are evaluated in relation to results for a comparison group of similar campuses. Results for a district are evaluated based on results for campus-level indicators aggregated across all campuses in the district. To be eligible to earn a distinction designation, a district or campus must receive an accountability rating of *A*, *B*, *C*, or *D*.

Academic achievement distinction designations. For the 2019 accountability ratings cycle, there were six campus-level academic achievement distinction designation (AADD) indicators for SAT and ACT examinations: (1) participation in either the SAT or ACT examination; (2) performance in ELA on the SAT; (3) performance in ELA on the ACT; (4) performance in mathematics on the SAT; (5) performance in mathematics on the ACT; and (6) performance in science on the ACT (TEA, 2019b). The ELA indicators were based on performance on the evidence-based reading and writing (ERW) section of the SAT and performance on the English and reading sections of the ACT. The mathematics indicators were based on performance on the mathematics section of each examination. The science indicator was based on performance on the science section of the ACT. The SAT and ACT indicators for AADDs were evaluated based on data for the class of 2018. AADDs were not available for districts. For information about SAT and ACT calculations for AADDs, see *College Admissions Testing Glossary of Terms, Class of 2018* (TEA, 2020a).

Closing the gaps distinction designations. For the 2019 accountability ratings cycle, one closing the gaps distinction designation (CGDD) was available at the campus level (TEA, 2019b). The CGDD included one SAT/ACT indicator as a component of the TSI criteria for the CCMR indicator within the Closing the Gaps domain in the accountability system: performance on SAT/ACT. For purposes of awarding CGDDs, the indicator measured the percentage of 2018 annual graduates plus students in

Grade 12 in the 2017-18 school year who successfully completed and earned credit for a college preparatory course or scored at or above the college-ready criteria on the TSI assessment, the SAT, or the ACT in both ELA and mathematics, among other CCMR criteria. The ELA college-ready criteria were defined as a score of 351 on the reading section of the TSI assessment; a score of 480 on the ERW section of the SAT; or a score of 19 on the English section and a composite score of 23 on the ACT. The mathematics college-ready criteria were defined as a score of 350 on the mathematics section of the TSI assessment; a score of 530 on the mathematics section of the SAT; or a score of 19 on the mathematics section and a composite score of 23 on the ACT. The SAT/ACT indicator for CGDDs was evaluated based on data for the class of 2018. For additional information about CGDDs, see *College Admissions Testing Glossary of Terms, Class of 2018* (TEA, 2020a).

Postsecondary readiness distinction designations. For the 2019 accountability ratings cycle, one postsecondary readiness distinction designation (PRDD) was available at the campus level, and one was available at the district level (TEA, 2019b). In each case, the PRDD included three SAT/ACT indicators: participation in either the SAT or ACT examination, TSI criteria graduates, and college, career, and military ready graduates. The TSI criteria graduates indicator measured the percentage of graduates who successfully completed and earned credit for a college preparatory course or scored at or above the college-ready criteria on the TSI assessment, the SAT, or the ACT in both ELA and mathematics. The ELA college-ready criteria were defined as a score of 351 on the reading section of the TSI assessment; a score of 480 on the ERW section of the SAT; or a score of 19 on the English section and a composite score of 23 on the ACT. The mathematics college-ready criteria were defined as a score of 350 on the mathematics section of the TSI assessment; a score of 530 on the mathematics section of the SAT; or a score of 19 on the mathematics section and a composite score of 23 on the ACT. The college, career, and military ready graduates indicator measured the percentage of 2018 annual graduates who successfully completed and earned credit for a college preparatory course or met the college-ready criteria on the TSI assessment, the SAT or the ACT in both ELA and mathematics, among other CCMR criteria. The SAT/ACT indicators for PRDDs were evaluated based on data for the class of 2018. For information about SAT and ACT calculations for PRDDs, see *College Admissions Testing Glossary of Terms, Class of 2018* (TEA, 2020a).

For the 2017 accountability ratings cycle and earlier cycles, the SAT/ACT performance indicator for PRDDs, as well as other SAT/ACT performance indicators before distinction designations were available, had criterion scores defined as a combined score of 1110 on the critical reading and mathematics sections of the previous version of the SAT and a composite score of 24 on the ACT (TEA, 2017). Using College Board's concordance tables, a combined score of 1110 on the critical reading and mathematics sections of the previous version of the SAT concurs to a combined score of 1180 on the ERW and mathematics sections of the redesigned SAT (College Board, 2016). In addition, a composite score of 24 on the ACT concurs to a combined score of 1180 on the ERW and mathematics sections of the redesigned SAT (ACT, Inc., & College Board, 2018). TEA continues to present performance results using these criterion scores (a composite score of 24 on the ACT and a combined score of 1180 on the ERW and mathematics sections of the SAT) in *College Admissions Testing Results for Graduating Seniors in Texas Public Schools, Class of 2018* (TEA, 2020b).

End-of-Course Substitute Assessments for Graduation

Beginning in the 2011-12 school year, in accordance with TEC §39.025 (2010), the commissioner of education approved a list of assessments, including the SAT and the ACT, that a student may substitute for end-of-course (EOC) assessments to meet graduation requirements (Title 19 of the Texas Administrative Code [TAC] §101.4002, 2019, amended to be effective January 8, 2019). An approved assessment may be used to substitute only one specific EOC assessment graduation requirement. A student who scored 530 or higher on the mathematics section of the redesigned SAT; 500 or higher on the mathematics section of the previous version of the SAT; or 22 or higher on the mathematics section of the ACT may substitute the assessment for the Algebra I EOC assessment graduation requirement. A student who scored 23 or higher on the science section of the ACT may substitute the assessment for the Biology EOC assessment graduation requirement. A student who scored 480 or higher on the ERW section of the redesigned SAT; 500 or higher on both the critical reading and writing sections of the previous version of the SAT; 22 or higher on the reading section and 18 or higher on the English section of an ACT examination taken in September 2015 or after; or 21 or higher on the reading section and 18 or higher on the English and writing sections combined on an ACT examination taken prior to September 2015 may substitute the assessment for the English I or English II EOC assessment graduation requirement.

Exemption From Texas Success Initiative Testing

In 1987, the Texas Legislature established a system of testing and remediation called the Texas Academic Skills Program, or TASP (TEC §51.306, 1988). In 2003, TASP was replaced by the TSI (TEC §51.3062, 2004). Under the TSI, undergraduate students enrolling for the first time in public institutions of higher education are required to take an assessment to evaluate their readiness for freshman-level academic coursework (TEC §51.333, 2019). For the class of 2018, the Texas Legislature allowed exemptions from TSI assessment requirements based on student performance on the SAT, the ACT, and the state assessment (19 TAC §4.54, 2019, amended to be effective February 28, 2018; TEC §51.3062, 2018). To qualify for an exemption based on the SAT or ACT, a student must have received a specified minimum score in one of the five years prior to enrollment in a public institution of higher education. For SAT examinations administered prior to March 2016, a student must have received a combined score of 1070 or higher on the critical reading and mathematics sections and (a) a score of 500 or higher on the critical reading section to be exempt from both the reading and writing sections of the TSI assessment or (b) a score of 500 or higher on the mathematics section to be exempt from the mathematics section of the TSI assessment. For SAT examinations administered in March 2016 or after, a student must have received a score of 480 or higher on the ERW section to be exempt from both the reading and writing sections of the TSI assessment, and a score of 530 or higher on the mathematics section to be exempt from the mathematics section of the TSI assessment. On the ACT, a student must have received a composite score of 23 or higher and (a) a score of 19 or higher on the English section to be exempt from both the reading and writing sections of the TSI assessment or (b) a score of 19 or higher on the mathematics section to be exempt from the mathematics section of the TSI assessment.

Reporting of SAT and ACT Results by the Texas Education Agency

Data Sources

Texas public schools. The College Board provides the Texas Education Agency (TEA) with annual examination results and demographic information for Texas public high school SAT examinees. Similarly, ACT, Inc., provides TEA with annual examination results and demographic information for Texas public high school ACT examinees. When registering for SAT or ACT examinations, students are asked to provide an expected year of graduation. To determine whether to include examinees in a given reporting year, TEA combines four years of testing data and uses information such as the student-reported expected year of graduation and actual year of graduation reported by school districts in the Public Education Information Management System (PEIMS). All Texas public school students who graduated in the 2017-18 school year, as reported in PEIMS, were considered class of 2018 graduates for this report. Because examinees who reported they expected to graduate in a given year may not have actually done so, the difference in reporting methods can result in imprecise participation rates. For the class of 2017 and earlier classes, TEA received examinees' scores from the testing companies based on student-reported year of graduation. For the class of 2018, TEA received scores from the testing companies based on year of test administration. Because of the changes in how class of 2018 examinees were identified, caution should be used when comparing participation results for the class of 2018 with results for earlier classes.

Students may take the SAT and ACT more than once. For the class of 2017 and earlier classes, TEA based performance results on each examinee's most recent tests. For the class of 2018, TEA based performance results on each examinee's best section scores across all tests taken. Those scores were used, in turn, to calculate SAT total scores and ACT composite scores. An examinee's best scores on the evidence-based reading and writing and mathematics sections were summed to calculate the examinee's SAT total score, and an examinee's best English, mathematics, reading, and science section scores were averaged to calculate the examinee's ACT composite score. These SAT total scores and ACT composite scores are commonly known as "superscores." Because of the changes in how class of 2018 examinee scores were calculated, performance results for the class of 2018 are not comparable to results for earlier classes. Scores for the small percentage of class of 2018 SAT examinees who took the previous version of the test were converted to scores comparable to those for the redesigned version of the test. This made it possible to determine the best scores across the two versions of the test and to summarize data for the class of 2018 SAT examinee population as a whole for the report *College Admissions Testing Results for Graduating Seniors in Texas Public Schools, Class of 2018* (TEA, 2020b). See the section "SAT and ACT Scoring" on page 5 for additional information on test score conversion.

Data on public school student grade level, race/ethnicity, economic status, and gender, as well as other relevant district, campus, and student information, are obtained from PEIMS. College Board and ACT, Inc., data on race/ethnicity and gender for examinees' most recent test records are used when the equivalent PEIMS data are not available.

Sums of public school examinees by student characteristic and program participation may differ from one another or from the total of all examinees. Whereas counts of all examinees reflect all examinees reported by the testing companies, counts of examinees by race/ethnicity and by gender reflect examinees who could be found in PEIMS plus examinees who could not be found in PEIMS but for whom the specified demographic data were available from the testing companies. Examinees reported by the testing companies may not be found in PEIMS because of data reporting errors. Because data on other student characteristics and program participation are not available from the testing companies, counts of examinees by these data reflect only those examinees who could be found in PEIMS.

Similarly, sums of public school graduates by student characteristic and program participation may differ from one another or from the total of all graduates. Graduate counts by student characteristic and program participation reflect only graduates who had student characteristic and program participation data available in PEIMS for the 2017-18 school year.

Combined public and nonpublic schools in Texas and in the United States. SAT and ACT results for public and nonpublic school graduates combined in Texas, other states, and in the United States were obtained, when available, from summary reports released annually by the College Board (College Board, 2018c, 2018d, 2018e) and ACT, Inc. (ACT, Inc., n.d.-a, 2018), respectively. Unlike the case with testing data reported by TEA, data provided in annual reports by the testing companies include only the results of examinees' most recent examinations. College Board reports for the class of 2018 include only the results from the version of the SAT examination administered in March 2016 or after. For this reason, and because scores on the redesigned SAT are not directly comparable to the previous version of the test, SAT performance results for the class of 2016 and earlier classes are not included in *College Admissions Testing Results for Graduating Seniors in Texas and the United States, Class of 2018* (TEA, 2019a). Results in the reports provided by the testing companies are based only on the scores of examinees identified by the College Board and ACT, Inc., as expecting to graduate in the reporting year.

The denominators for examination participation rates obtained from the College Board and ACT, Inc., are projected counts of graduating seniors reported by the Western Interstate Commission for Higher Education (WICHE). Participation rates not available from College Board or ACT, Inc., reports were derived by dividing counts of graduating examinees obtained from the testing companies by WICHE projections of graduating seniors.

Beginning with the class of 2016, the College Board reported SAT data for the following seven racial/ethnic categories: African American, American Indian, Asian, Hispanic, Pacific Islander, White, and multiracial. Prior to the class of 2016, the College Board reported SAT data for the following four racial categories: African American, American Indian, Asian/Pacific Islander, and White. In addition, the College Board reported SAT data for three separate Hispanic subgroups: Mexican American, Puerto Rican, and other Hispanic students. TEA used these data to calculate results for Hispanic students overall.

Beginning with the class of 2011, ACT, Inc., reported ACT data for the following seven racial/ethnic categories: African American, American Indian, Asian, Hispanic, Pacific Islander, White, and multiracial. Prior to the class of 2011, ACT, Inc., reported ACT data for the following five racial/ethnic categories: African American, American Indian, Asian/Pacific Islander, Hispanic, and White.

Interpretation of Results

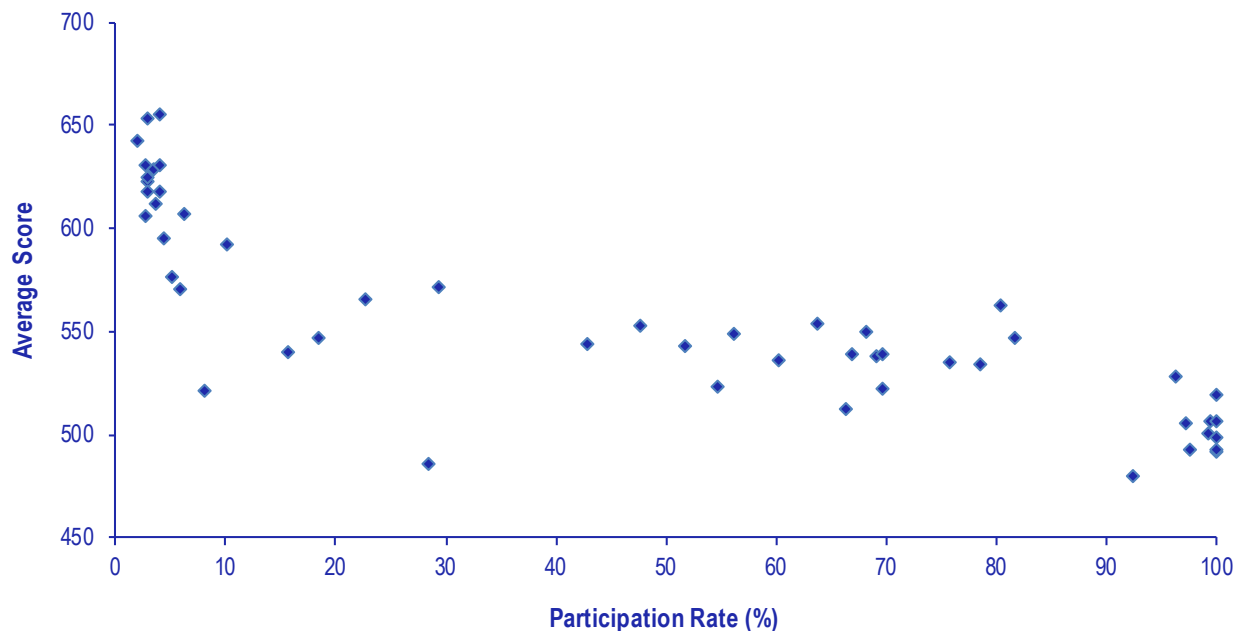
The effect of group size. It may be informative to compare a group's performance results over time, but the reliability of such comparisons depends on the sizes of all groups. When a group is small, compared to other groups, reliability is reduced, and caution should be used when interpreting change over time. In general, changes in the performance of a large group, such as White SAT examinees in Texas, are less likely to have occurred by chance than changes in the performance of a small group, such as American Indian or Pacific Islander SAT examinees in Texas. The reliability of between-group comparisons also depends on the sizes of the groups. When groups differ substantially in size, comparisons of performance results between them can be misleading and, generally, are not appropriate. For example, the American Indian and Pacific Islander examinee populations are small in number, compared to other racial/ethnic examinee populations. Therefore, performance results for these groups should not be compared from year to year or to other racial/ethnic groups.

The effect of participation rate. Because both the SAT and ACT are voluntary, a self-selected portion of the high school population takes the tests. In situations like this, the rate of participation plays an important role in the interpretation of performance results. Specifically, the accuracy of the estimate of the performance results for a population on a given examination depends on the proportion of that population that takes the examination. For example, a 90 percent participation rate would generally yield a performance result that is more representative of the population than a 10 percent participation rate. This effect of participation rate on reported performance results affects the kinds of group comparisons that can be made. Typically, in groups with low participation rates, the examinees have completed academically rigorous courses and apply to the nation's most selective scholarship programs and colleges (College Board, 2018b). Consequently, low participation rates generally result in inflated performance estimates. Assuming the average ability level of each population is, in reality, the same, the performance estimate for a population with a very low participation rate will usually be higher than the performance estimate for a population with a high participation rate.

The inverse relationship between participation rate and performance is illustrated by SAT mathematics participation and performance data in the 50 states and the District of Columbia for the class of 2018 (Figure 1). As a state's participation rate increases, its average score usually decreases. Bias in the estimate of a population's performance tends to be reduced when the participation rate is moderate to high. Participation rates directly affect the validity of comparisons among states, districts, campuses, and various student groups. Generally, comparisons of performance on the SAT or ACT are most informative between groups with similar participation rates.

Participation rates over time. SAT and ACT participation rates can be affected by many factors, including varying graduation rates, availability of test fee waivers, availability of financial aid for higher education, school-day testing, and state-mandated participation in one of the examinations. The number of graduates is the denominator in SAT and ACT participation rate calculations, and the number of examinees is the numerator. In 2005, for the first time in nearly a decade, the number of students graduating from Texas public schools decreased (TEA, 2006). Because the decrease in graduates did not result from a decrease in enrollment, and because the numbers of SAT and ACT examinees increased,

Figure 1
Relationship Between SAT Mathematics Participation and Performance for States, Class of 2018



Source: Primary data from College Board.

examination participation rates increased for all student groups in 2005. Shifts such as this should be taken into account when comparing participation rates over time. For the class of 2017 and earlier classes, TEA received examinees' scores from the testing companies based on student-reported year of graduation. For the class of 2018, TEA received examinees' scores from the testing companies based on year of test administration. Because of this change, caution should be used when comparing participation results for the class of 2018 with results for earlier classes.

Texas Education Code §39.0261 (2019) provides that "high school students in the spring of the 11th grade or during the 12th grade may select and take once, at state cost, one of the valid, reliable, and nationally norm-referenced assessment instruments used by colleges and universities as part of their undergraduate admissions processes." Under the Texas College Preparation Program, TEA contracted with the College Board and ACT, Inc., to offer free SAT and ACT examinations in 2010 and 2011 to high school juniors enrolled in Texas public school districts and charters. The standard registration fees for the SAT and ACT were funded by TEA.

Beginning in the 2011-12 school year, three Texas public school districts offered SAT School Days to their 11th- and/or 12th-grade students (J. Schott, personal communication, May 12, 2016). Similarly, beginning in the 2012-13 school year, one Texas public school district offered ACT district testing (M. Fuller, personal communication, August 24, 2016). The purpose of SAT School Days and ACT district testing is to increase student access to SAT and ACT examinations by offering the examinations at no cost or at reduced cost to students during school hours (College Board, 2018a;

M. Fuller, personal communication, September 25, 2017). The number of school districts offering SAT School Days and ACT district testing increased every school year from the initial year offered to 2017-18.

Calculation of Texas public school SAT and ACT participation rates changed beginning with the class of 2012. For the class of 2011 and earlier classes, students served in special education programs were included in the numerators but excluded from the denominators in such calculations. Beginning with the class of 2012, special education students were included in both numerators and denominators. Consequently, results for the class of 2012 and later classes are not comparable to results for the class of 2011 and earlier classes.

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Abstract. This report presents general information about the SAT and ACT, including descriptions of the examinations, uses of individual scores in Texas, data sources, and interpretation of results, as a supplement to the following reports: *College Admissions Testing Results for Graduating Seniors in Texas Public Schools, Class of 2018* (Texas Education Agency [TEA], 2020b) and *College Admissions Testing Results for Graduating Seniors in Texas and the United States, Class of 2018* (TEA, 2019a).

The report is available in PDF format on the agency website at <https://tea.texas.gov/reports-and-data/school-performance/accountability-research/college-admissions-testing-sat-and-act>. Additional information about this report may be obtained by contacting the Texas Education Agency Division of Research and Analysis by phone at (512) 475-3523 or by e-mail at Research@tea.texas.gov.

For additional information about the SAT, contact the College Board Southwestern Regional Office at (866) 392-3017 or <https://www.collegeboard.org/>. For additional information about the ACT, contact ACT, Inc., Southwest Region, at (512) 345-1949 or <http://www.act.org/>.



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