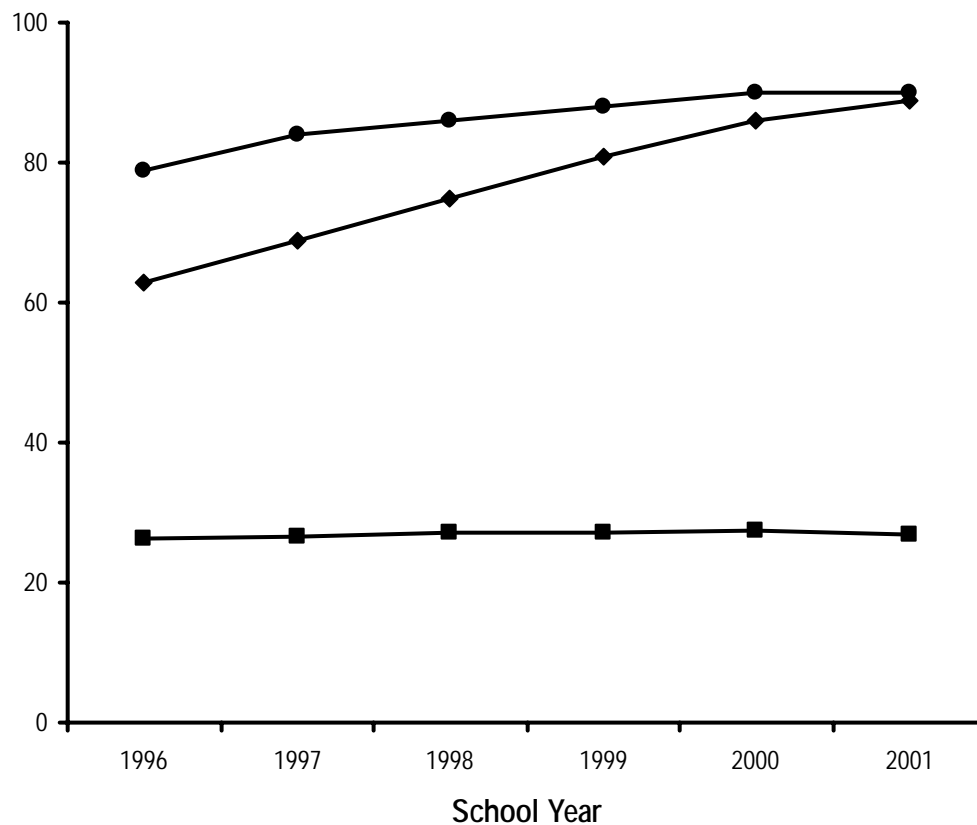


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Texas Assessment of Academic Skills and College Entrance Examination Performance Trends in Texas



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Abstract. Two key measures of high school performance in Texas public schools are performance on the exit-level Texas Assessment of Academic Skills (TAAS) and performance on the SAT I and ACT. Between 1994 and 2002, TAAS scores increased substantially, whereas SAT I and ACT scores remained essentially stable. This report reviews differences between the TAAS and the SAT I and ACT examinations that contributed to differences in performance trends, namely (1) purpose and type of test; (2) examinee population; and (3) academic proficiency level assessed. Because of these differences, the assessments are valuable, but distinct, measures of high school performance. The gains in exit-level TAAS scores indicate that an increasing percentage of students were mastering the academic skills required to obtain a high school diploma in Texas. The essentially stable SAT I and ACT performance indicates that high school students in Texas maintained a stable level of college readiness, relative to the mean performance of the national norm groups for the SAT I and ACT.

Keywords. TAAS, SAT,[®] ACT, college entrance examination, testing, accountability, indicators.

Cover. Percentage Passing Exit-Level TAAS and Percentage Meeting Criterion on SAT I or ACT, Texas Public Schools, 1996 Through 2001. See page 5 for details.

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Texas Education Agency
Austin, Texas
December 2003

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Introduction

From the inception of the Texas Assessment of Academic Skills (TAAS) in 1990 through 2002, the performance of Texas public high school stu-

SAT I is administered an average of seven times per year, and the ACT is administered an average of six times per year. Participation in SAT I and ACT testing is voluntary. Usually only those students who are interested in pursuing college study

in 2001, and the mean Mathematics TLI score increased from 72 to 81. The mean scale scores on the SAT I Verbal and Mathematics sections decreased slightly during this time period: from 493 to 490 for Verbal and from 500 to 498 for Mathematics. Mean scale scores were 43.9 (98-1.8) for Verbal and 43.9 (98-1.8) for Mathematics.

TAAS and SAT I and ACT: Different Types of Tests

Two Major Types of Standardized Tests

Standardized tests can be categorized into two major groups: criterion-referenced and norm-referenced (see Table 1). Criterion-referenced and norm-referenced tests differ in purpose, selection of item content, and assignment of scores (Bond, 1996). Each type of test has advantages and limitations, and each is appropriate in certain situations (Isaac & Michael, 1995).

TAAS Is a Criterion-Referenced Test

As a statewide, criterion-referenced assessment, the TAAS was designed to assess mastery of a specific domain of knowledge. Content validity—the degree to which the items on a test adequately assess the content they were designed to assess—is the primary concern in the construction of items for and interpretation of results of a criterion-referenced test. Items on the exit-level TAAS were selected to ensure adequate content coverage of the first two years of the state-mandated high school curriculum. Through 1996, items were selected to represent the range of content and difficulty of the skills outlined in the Essential Elements. From 1997, item content reflected the skills outlined in the TEKS (TEA, 2001). Examinee performance was compared to a preset standard or criterion score that was determined to be an acceptable level of performance. Examinees who met or exceeded the criterion score were deemed to have achieved the required degree of mastery of the skills measured by the test.

Because performance on the TAAS was measured against objective criteria rather than against the performance of other students, the percentage of participants that passed the examination was not limited. Effort on the part of students, parents, and educators over time can increase the percentage of students mastering the domain of knowledge on a criterion-referenced test. Gains in performance can be achieved through factors such as alignment of instruction with the curriculum, increased parental involvement, tutoring, accelerated instruction, teacher training, and increased student motivation and effort. The increase in

Table 1
Characteristics of Criterion-Referenced and Norm-Referenced Tests

Criterion-referenced	Norm-referenced
Purpose: Tests are constructed to determine whether examinees have achieved a predetermined level of mastery of a skill or knowledge of a specific content area or areas.	Purpose: Tests are constructed to discriminate among levels of performance, producing a rank order of performance across a continuum of achievement.
Item Selection: Items are selected to ensure adequate to d	

TAAS scores indicated that more students each year were learning the essential knowledge and skills prescribed in the state curriculum. The improvement in TAAS scores was consistent with expectations for a high-stakes, criterion-referenced test in a public school accountability system.

SAT I and ACT Are Norm-Referenced Tests

As norm-referenced tests, the SAT I and ACT are designed “to highlight achievement differences between and among students to produce a dependable rank order of students across a continuum of achievement from high achievers to low achievers” (Stiggins, 1994, as cited in Bond, 1996, p. 1). The SAT I and ACT are used to predict performance in college classes. As such, predictive validity—the degree to which a test accurately estimates some criterion level of performance—is of primary concern in the construction of items and interpretation of results. Items are selected to discriminate between high performers and low performers; that is, difficult items should be answered correctly by many of the highest performers but by few of the lowest performers. Examinees’ scores on a norm-referenced test are interpreted relative to the scores of a norm group, a group which serves as a frame of reference against which to interpret individual scores. Individual performance is represented both as a scale score and as a percentile rank. A scale score is a

ACT (see Figure 6). The TAAS examinees who later took the SAT I or ACT had Reading and Mathematics TLI scores that were from 11 to 15 points higher than the subset of TAAS examinees who did not later take the SAT I or ACT. For example, the 91,026 students who took the TAAS in 1999 and then took the SAT I/ACT in 2001 had a mean Reading TLI score of 89 and a mean Mathematics TLI score of 84. The 142,631 students who took the TAAS in 1999 but did not later take the SAT I or ACT had a mean Reading TLI score of 77 and a mean Mathematics TLI score of 73. The SAT I and ACT examinee population was self-selected and made up primarily of students

The exit-level TAAS was a criterion referenced test and was designed to assess mastery of essential skills of the Texas high school curriculum. Progress was interpreted relative to a set criterion score. Effort on the part of students, parents, and educators over time can increase the percentage of students mastering the domain of knowledge on a criterion-referenced test. The improvement in TAAS scores was consistent with expectations for a high-stakes, criterion-referenced test in a public school accountability system.

On the other hand, the SAT I and ACT are norm-referenced tests and are designed to discriminate among examinees with higher and lower levels of readiness for college-level study. SAT I and ACT scores must be interpreted relative to national norms. The nature of norm-referenced college entrance examinations is such that large annual increases in state average performance are uncommon. The relatively flat SAT I and ACT performance trends indicate that high school students in Texas, on average, maintained a stable level of college readiness, relative to the mean performance of the national norm groups for the SAT I and ACT.

The TAAS was a mandatory examination. Satisfactory performance on the TAAS was required for a Texas high school student to receive a diploma. The SAT I and ACT are voluntary tests, taken by only a self-selected subset of those stu-

dents who took the TAAS. TAAS performance trends were distinct for the group of TAAS exami-

were not valid or that improvements in performance were not real. Each examination is a valuable, but distinct, measure of high school performance, and each provides insight on educational progress in Texas.

Performance trends on state and national assessments in other states also depend on test designs, populations tested, and proficiency levels assessed. Likewise, the variability in state assessment programs limits comparisons of performance across states. The more similar the assessment measures are, the higher the correlation of performance results will be.

The gains in exit-level TAAS scores indicate that an increasing percentage of students were mastering the academic skills required to obtain a high school diploma in Texas. In other words, more students showed each year that they were learning the essential knowledge and skills prescribed in the Texas high school curriculum. Continued improvements in performance on statewide

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