CollegeBoard | SAT®

Primary Results from the National SAT® Validity Study

The redesigned SAT® covers the content and skills that research shows matter most for college readiness—and it remains a strong predictor of college success.

Major Findings

- The SAT is strongly predictive of college success; students with higher SAT scores are more likely to have higher grades in college.

- Using the SAT in conjunction with high school GPA (HSGPA) is the most powerful way to predict future academic performance.

- The SAT is useful beyond admissions; data show that SAT scores are important predictors of student retention to the second year.

- Colleges can use SAT scores to identify students who may need academic support before they start college and throughout their college education.

Background and Purpose

This summary describes key results from the first national operational SAT validity study since the College Board redesigned and launched the SAT in March 2016. The study examines the utility of SAT scores for college admission decisions, focusing on student outcomes in college as represented by first-year grade point average (FYGPA) and retention to the second year of college. It is based on data from more than 223,000 students across 171 four-year colleges and universities. (The complete report, *Validity of the SAT for Predicting First-Year Grades and Retention to the Second Year,* is available at **sat.org/validitystudy**.)

Relationship Between SAT Scores and First-Year College GPA

Table 1 on the following page shows correlations computed between FYGPA and several other measures: different SAT scores (Total Score, Evidence-Based Reading and Writing [ERW] section score, and Math section score) and HSGPA. Figure 1 shows that as the SAT score bands increase, so does the mean FYGPA.
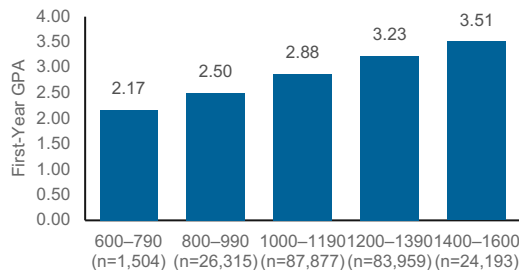
More information and the complete report at: sat.org/validitystudy.

Table 1. Correlations of Predictors with FYGPA[1]

| Predictor(s)	Correlation[2]
SAT, HSGPA	.61 (.42)
HSGPA	.53 (.33)
SAT	.51 (.32)
SAT ERW	.49 (.29)
SAT Math	.47 (.27)
Note. *n* = 223,858. References to "SAT" alone include SAT ERW and SAT Math sections.	

**Figure 1. Mean FYGPA by SAT total score band.**

Relationship Between SAT Scores and Retention to the Second Year

The study also examined the relationship between SAT scores and the percentage of students returning for the second year of college. Results show that students with higher SAT scores are more likely to return for the second year (see Figure 2). In addition, Figure 3 shows that students who underperform in college, based on performance predicted by their SAT scores and HSGPA, are far less likely to return for their second year compared to those who perform as expected or above.

Figure 2. Mean second-year retention.
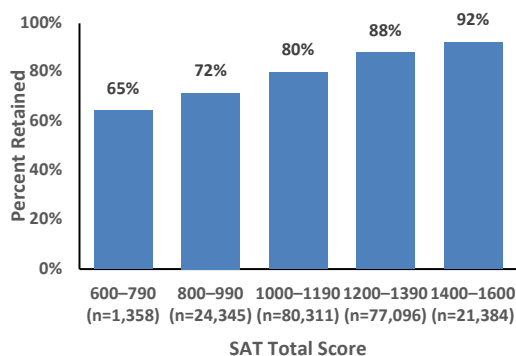
Figure 3. Retention by students under-performing and performing-as-expected or better rate by SAT total score bands.
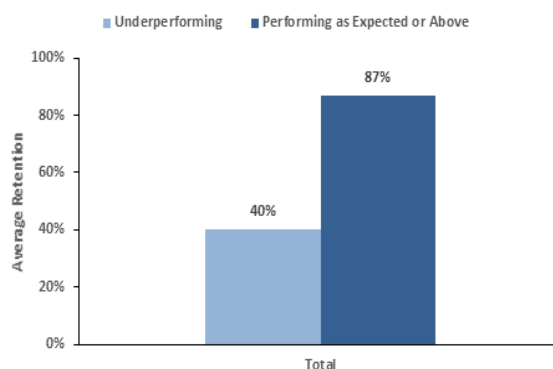
Next Steps

Future research will examine SAT validity by institutional and student subgroups and will extend the analysis of the relationship between SAT scores and other college outcomes, including course-specific grades, later college performance, and degree completion.

1. An often-cited rule of thumb for interpreting correlation coefficients is that a small correlation has an absolute value of approximately .10; a medium correlation has an absolute value of approximately .30; and a large correlation has an absolute value of approximately .50 or higher. From Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

2. Both raw and corrected correlations are presented. Correlations were corrected for restriction of range using the Pearson-Lawley multivariate correction with the 2017 College-Bound Seniors Cohort as the population. Note that it is a widely accepted practice to statistically correct correlation coefficients for restriction of range since only a sample (admitted/enrolled students) is available for analysis as opposed to the population (all applicants) for which the measure (SAT) was used to make decisions.

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