

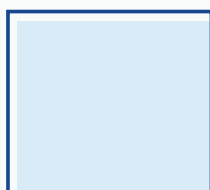
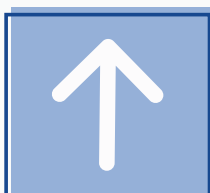


A Study of the Impact of SAT® Tutorials on Student Achievement

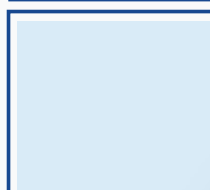
School Years 2017-2018

Students using SAT® Tutorials improved 56%

56%



Pretest



Posttest



Introduction

The purpose of this study is to examine the impact of Apex Learning SAT® Tutorials on student learning during the 2017–2018 school year. The analysis addresses the question: “What impact does SAT® Tutorials use make on achievement gain from pretest to posttest.”

Apex Learning SAT® Tutorials provide instruction, practice, and assessment aligned to concepts assessed by the SAT® reading, writing and language, and math subject tests. Tutorials for each of these subject areas provide students with an individualized course of study that includes modules of instruction and practice based on the results of unit pretests. The course of study adapts to students’ unique learning needs as they complete modules and formative assessments.

After completing 100% of the unit modules, students complete a posttest to evaluate their progress. Tutorials assessment results link students’ performance to concepts assessed by the SAT® tests, quickly identifying where students have demonstrated content mastery and where they still need to focus their learning.

Results

Apex Learning SAT® Tutorials significantly improved student achievement on Tutorials posttest assessments across reading, writing and language, and math.

Results of paired-samples t-tests (Table 2) suggest that SAT® Tutorials had a statistically significant impact on Tutorials posttest achievement compared to pretest performance.

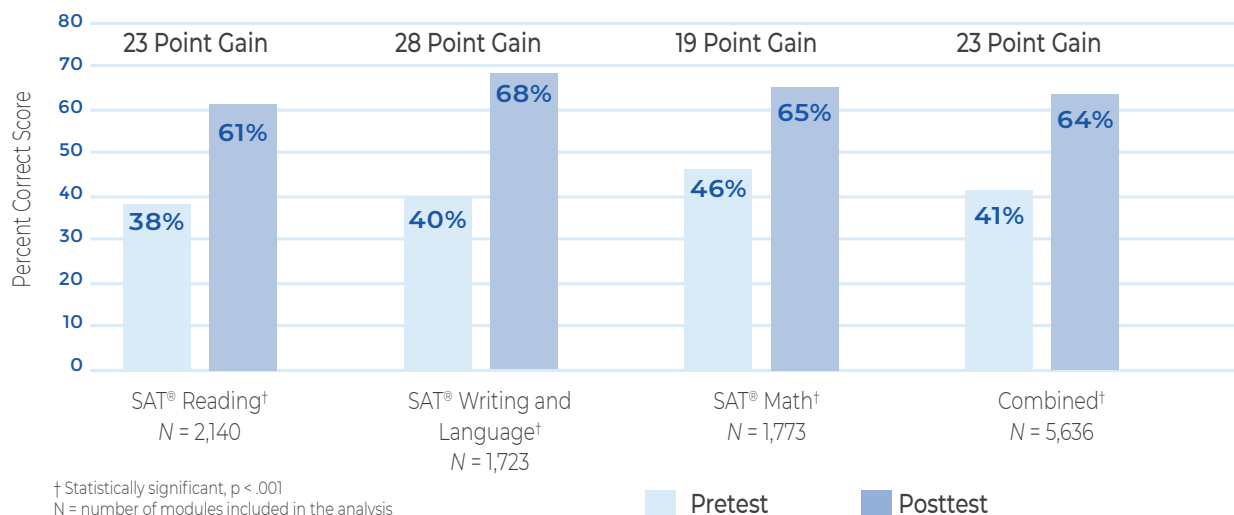
The findings suggest:

- Student achievement improved 23 percentage points from pretest to posttest following use of SAT® Tutorials combined (Figure 1).
- The gain from pretest to posttest was equivalent to 29 percentile points for Tutorials combined (Figure 2).

Figure 1 shows posttest improvement ranged from 19 to 28 percentage points by subject and 23 percentage points combined following use of SAT® Tutorials. Table 1, in the appendix, shows pretest, Test It, and posttest descriptive statistics.

Figure 1

SAT® Tutorials Average Pretest, Posttest, and Gain: Percent Correct Score

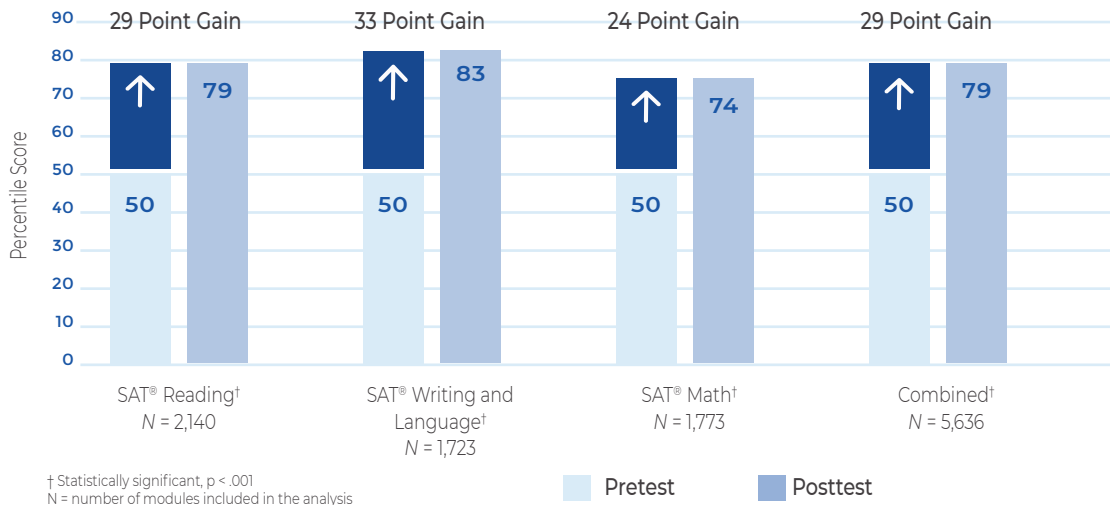


The percent of seniors graduating on time continues to trend higher than prior to using Apex Learning digital curriculum.

The graduation rates for Reconnect participants enrolled in grade 12 for the school years Apex Learning Courses were used trended higher than the graduation rate from the school year prior to implementing Apex Learning Courses district-wide (Figure 2). The percent of students graduating on time after using Apex Learning in 2014–2015 was statistically significant (z-ratio 2.22, $p < .01$) compared to the year prior to using Apex Learning.

Figure 2

SAT® Tutorials Average Pretest, Posttest, and Gain: Percent Correct Score



Apex Learning Tutorials Description

Apex Learning SAT® Tutorials provide targeted instruction, practice, and review of content and skills assessed by each test included in the SAT® Exam. Pretests and embedded formative assessments build an individualized course of study for each student that includes direct instruction, practice, review, and assessment that continually adapts to each student’s unique learning needs.

Study Description

Study Design

A pretest posttest single-group design was used to evaluate the impact of Tutorials use on posttest performance.

Participants

During the 2017–2018 school year, students from across the nation used more than 20,000 SAT® Tutorials modules. Student enrollments with completed unit pretests, 100% of unit modules, and unit posttests were included in the analytical dataset.

Data Preparation

Apex Learning provided 23,782 records of student-level module data. Unit level pretest and posttest scores were distributed across modules by corresponding objectives. Twenty-four percent (24%) of modules containing pretest, Test It, and posttest scores were included in the analytical dataset.

Analysis

Paired-samples t-tests were used to determine if the average module posttest score was significantly greater than the average module pretest score by subject area and subjects combined. Cohen's d was used as a measure of effect size.

Limitations

A single-group design was used to analyze the impact of Tutorials use on pretest to posttest gain. Single-group design studies are limited by not having a comparison group to control for events unrelated to the intervention that could impact posttest performance. Events unrelated to intervention include participant maturation, testing, instrument decay, and regression to the mean.

Outcome Measures

The outcome measure used in this study is the Tutorials posttest score reported at the module level.

Appendix

Table 1. Module Level Descriptive Statistics								
Subject		Enrollment ID	Initial Pretest Score		Max Test It Score		Max Posttest Score	
		<i>N</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
English	SAT® Reading	2,140	37.75	29.02	66.65	32.09	60.73	34.25
	SAT® Writing and Language	1,723	40.16	29.55	72.72	29.98	67.90	33.37
Math	SAT® Math	1,773	46.28	28.03	67.34	28.98	64.61	31.10
Combined		5,636	41.40	28.87	68.90	30.35	64.41	32.90

Table 2. Paired-Samples t-Tests						
Subject		Paired Differences Mean	df	t	Sig. p	ES
English	SAT® Reading	22.98	2,139	27.811	0.00 †	0.79
	SAT® Writing and Language	27.74	1,722	30.425	0.00 †	0.94
Math	SAT® Math	23.02	1,772	24.848	0.00 †	0.65
Combined		18.71	5,635	47.658	0.00 †	0.80

†Statistically significant, $p < .001$



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An industry leader with deep expertise in digital curriculum, Apex Learning works closely with school districts across the country to implement proven solutions that increase on-time graduation rates and create opportunities for student success in school and beyond. The company is driven by the understanding that supporting the needs of all students – from struggling to accelerated – strengthens schools and creates stronger communities, brighter futures and a more equitable world. Apex Learning is accredited by AdvancEd and its courses are approved for National Collegiate Athletic Association eligibility. Apex Learning, where opportunity thrives. For more information, visit <http://www.apexlearning.com>.

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