

Connecticut SAT School Day Peer Review Study

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Introduction

The purpose of this report is to present findings of a study that examines the relationship between Connecticut SAT School Day achievement standards and outcomes measuring College and Career Readiness. These outcomes include the percentage of students earning a regular high school diploma, postsecondary education enrollment rate, postsecondary education completion rate and workplace annual earnings. The results of the study show that students in higher performance levels on the Connecticut SAT School Day are more likely to achieve these future outcome measures. This provides the evidence necessary to fulfill the requirements for Critical Element 6.3 in the U.S. Department of Education’s State assessment peer review.

Connecticut SAT School Day

Connecticut chose the SAT School Day as the high school accountability measure for Grade 11 students in lieu of Smarter Balanced starting from the school year of 2015-16 (SY2015-16). The SAT School Day is a nationally recognized college readiness assessment that is approved by the CT State Board of Education and that measures essential and grade-appropriate skills in reading, writing, and mathematics. Studies including the [Connecticut SAT School Day Alignment Study](#) and the [Alignment to Connecticut Core Standards](#) have shown that the academic achievement standards of the SAT School Day are well aligned with Connecticut’s academic content standards, the Connecticut Core Standards.

Tables 1 and 2 list the test administrations of Connecticut SAT School Day from SY2015-16 to SY2024-25. In SY2019-20, all statewide academic assessments were cancelled due to the COVID-19 pandemic. In SY2020-21, school learning models changed throughout the school year and many students learned remotely for a significant part of the year. The test participation rates are 94% or higher in all years, except for SY2020-21 where the participation rates could be affected by school learning models that year. The proficiency rates (students who score at or above performance level 3) of ELA are between 61.6% and 65.4% before SY2020-21 and between 52.4% and 59.3% at/after SY2020-21. The proficiency rates of Math are between 39.3% and 41.3% before SY2020-21 and between 29.5% and 37.3% at/after SY2020-21. Details of participation rates and achievement data by student subgroups can be found in [EdSight- Connecticut SAT School Day](#).

Table 1: Connecticut SAT School Day Participation Rates

School Year	Subject	Total Number of Students	Total Number Tested	Participation Rate (%)
2015-16	ELA	40163	37872	94.3
2015-16	Math	40163	37872	94.3
2016-17	ELA	40002	38421	96.0
2016-17	Math	40002	38421	96.0
2017-18	ELA	39814	37923	95.3
2017-18	Math	39814	37923	95.3
2018-19	ELA	38918	37513	96.4
2018-19	Math	38918	37513	96.4

School Year	Subject	Total Number of Students	Total Number Tested	Participation Rate (%)
2020-21	ELA	39033	33137	84.9
2020-21	Math	39033	33137	84.9
2021-22	ELA	38047	35756	94.0
2021-22	Math	38047	35756	94.0
2022-23	ELA	38369	36190	94.3
2022-23	Math	38369	36190	94.3
2023-24	ELA	39339	37143	94.4
2023-24	Math	39339	37143	94.4
2024-25	ELA	38600	36685	95.0
2024-25	Math	38600	36685	95.0

Table 2: Connecticut SAT School Day Performance Results

School Year	Subject	Total Number With Scored Tests	Level 1 (%)	Level 2 (%)	Level 3 (%)	Level 4 (%)	Level 3 and 4 (%)	Average Score
2015-16	ELA	37853	17.7	17.3	47.8	17.2	65.0	520
2015-16	Math	37816	23.2	37.5	28.2	11.1	39.3	502
2016-17	ELA	38419	17.6	17.0	46.3	19.1	65.4	524
2016-17	Math	38290	21.2	37.5	28.8	12.5	41.3	507
2017-18	ELA	37814	20.0	17.6	45.1	17.3	62.4	516
2017-18	Math	37737	23.2	36.4	29.2	11.1	40.3	503
2018-19	ELA	37400	20.8	17.7	45.1	16.5	61.6	514
2018-19	Math	37344	26.4	32.9	28.5	12.1	40.6	500
2020-21	ELA	33050	20.4	20.3	44.0	15.3	59.3	509
2020-21	Math	33009	28.0	34.8	26.8	10.4	37.3	495
2021-22	ELA	35638	24.1	20.2	41.3	14.3	55.6	501
2021-22	Math	35562	31.9	33.3	25.0	9.7	34.8	486
2022-23	ELA	36019	27.5	20.1	39.0	13.4	52.4	493
2022-23	Math	35971	33.5	32.3	24.7	9.4	34.1	482
2023-24	ELA	37001	27.7	17.4	40.3	14.5	54.8	491
2023-24	Math	37001	36.0	34.6	21.0	8.4	29.5	471
2024-25	ELA	36616	25.9	16.1	43.5	14.6	58.0	497
2024-25	Math	36616	35.4	33.5	22.0	9.2	31.1	472

Other Data Sources

Student Earning a Regular High School Diploma Data

Data for students earning a regular high school diploma is retrieved from the exit data collected in Connecticut's Public School Information System (PSIS) as submitted by school districts. When a

student enters or leaves their district, the district must report student's 1) Entry and exit dates, 2) Attendance data and 3) Exit types and statuses. One of the exit types is "Graduate High School with a Regular Diploma: Graduated with regular, advanced, International Baccalaureate, or other type of diploma". Details of all exit types can be found in [Tracking student exits from Public school](#).

For this study, each Grade 11 Connecticut SAT School Day test-taker between SY2015-16 and SY 2023-24 is matched with their exit data in PSIS to see whether they graduated with a regular high school diploma before the end of the next calendar year after they took the SAT School Day. For the Grade 11 repeaters who took SAT School Day more than once, their latest test records are used in this study. The cohort of the SY2024-25 test-takers are not included in this study since most of them are still in Grade 12.

Postsecondary Education Enrollment and Completion Data

Each year, the Connecticut State Department of Education (CSDE) sends a file to the National Student Clearinghouse (NSC) of all public high school students who graduate in the most recent academic year with a standard diploma. Approximately 38,000 records are sent annually to the NSC. These records and those for the prior seven graduating classes are then matched with NSC records from colleges and universities across the nation, representing about 96% of all college enrollments at public and private non-proprietary degree-awarding institutions. NSC uses probabilistic matching to return enrollment and graduation and degree awards data for matching records. In this study, if a student earned more than one postsecondary degree, the earliest degree granted was used for graduation time calculation, specifically whether a student earned a postsecondary degree within 6 years after they graduated from high school.

Workforce Wage Data

To assess the employment wage-earning outcomes of the SAT test-takers, CSDE requested Connecticut Department of Labor (CTDOL) records from the Unemployment Insurance (UI) database through Connecticut's multi-agency data sharing program, the Preschool through 20 and Workforce Information Network (P20WIN). This process uses a federated data sharing mechanism. Member agencies include CSDE and CTDOL. P20WIN provides a high degree of data security because the system is managed by the participating agencies and because the data matching and data analysis processes are separated. CSDE requested wage and employment data through P20WIN, matching CTDOL records with records for the SAT test-takers who graduated from high school in this study.

Cohorts of students for the data analysis are grouped based on the school year when they took the SAT School Day. As mentioned previously, there is a total of eight cohorts available in this study (Table 3). Student earning a regular high school diploma data is available for each cohort. Postsecondary education enrollment data is available for the first 6 cohorts while postsecondary completion within six years after high school graduation is available for the first two cohorts. For the wage data analysis, the CSDE includes the cohorts with more than five years of data after their high school graduation.

Table 3: Available Data Sources by Student Cohorts

Cohort	Student Earning a Regular High School Diploma Data	Postsecondary Education Enrollment Data	6-year Postsecondary Education Completion Data	Workforce Wage Data (At least 6 years of data after high school graduation)
SAT_SY2015-16	Yes	Yes	Yes	Yes (7 years of data)
SAT_SY2016-17	Yes	Yes	Yes	Yes (6 years of data)
SAT_SY2017-18	Yes	Yes	No	No
SAT_SY2018-19	Yes	Yes	No	No
SAT_SY2020-21	Yes	Yes	No	No
SAT_SY2021-22	Yes	Yes	No	No
SAT_SY2022-23	Yes	No	No	No
SAT_SY2023-24	Yes	No	No	No

Methods

The CSDE examined the relationship between SAT School Day performance and the postsecondary outcomes by way of cross-tabulations comparing students’ performance levels and the outcomes. SAT performance levels represent levels of performance for participating students on their grade-level skills and knowledge. Each student’s performance level is reported by content area (i.e., ELA and math) and ranges from levels 1 to 4 with level 1 designated as “Does Not Meet the Achievement Standard”, level 2 as “Approaching the Achievement Standard”, level 3 as “Meets the Achievement Standard,” and Level 4 as “Exceeds the Achievement Standard.” The same analysis then repeated based on student’s free- or reduced-price meal (FRPM) eligibility status.

Findings

Students at Performance levels 3 and 4 had slightly greater likelihood of earning a regular high school diploma.

Figures 1-4 show the percentage of students who received a standard high school diploma before the end of the next calendar year after they took the SAT School Day. The results show that the likelihood of earning a regular high school diploma increases for students functioning at the next higher performance level. This pattern holds for both ELA and Math performance levels. The same pattern also holds when the data are disaggregated based on the student’s FRPM eligibility status.

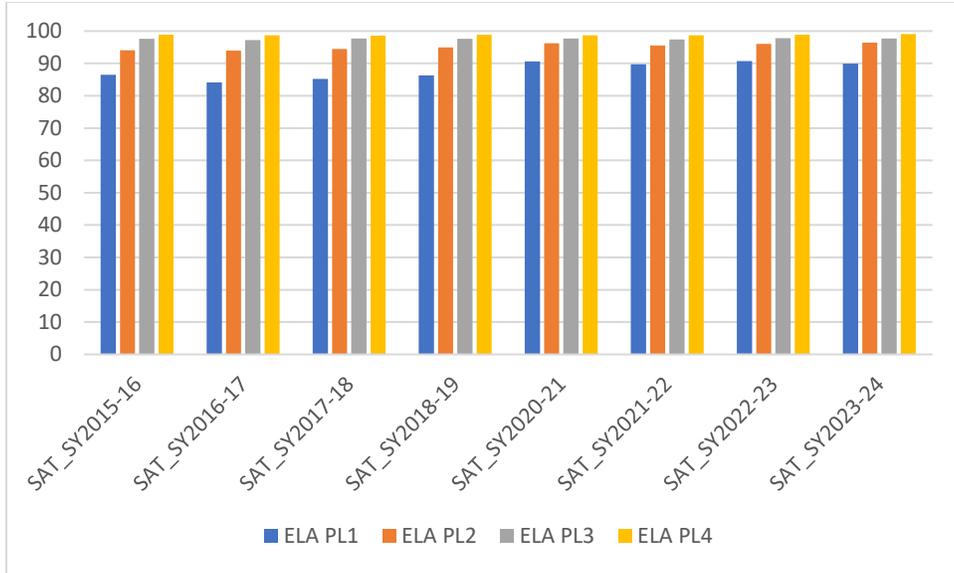


Figure 1: Percentage of Students Earning a Regular HS Diploma by ELA PL

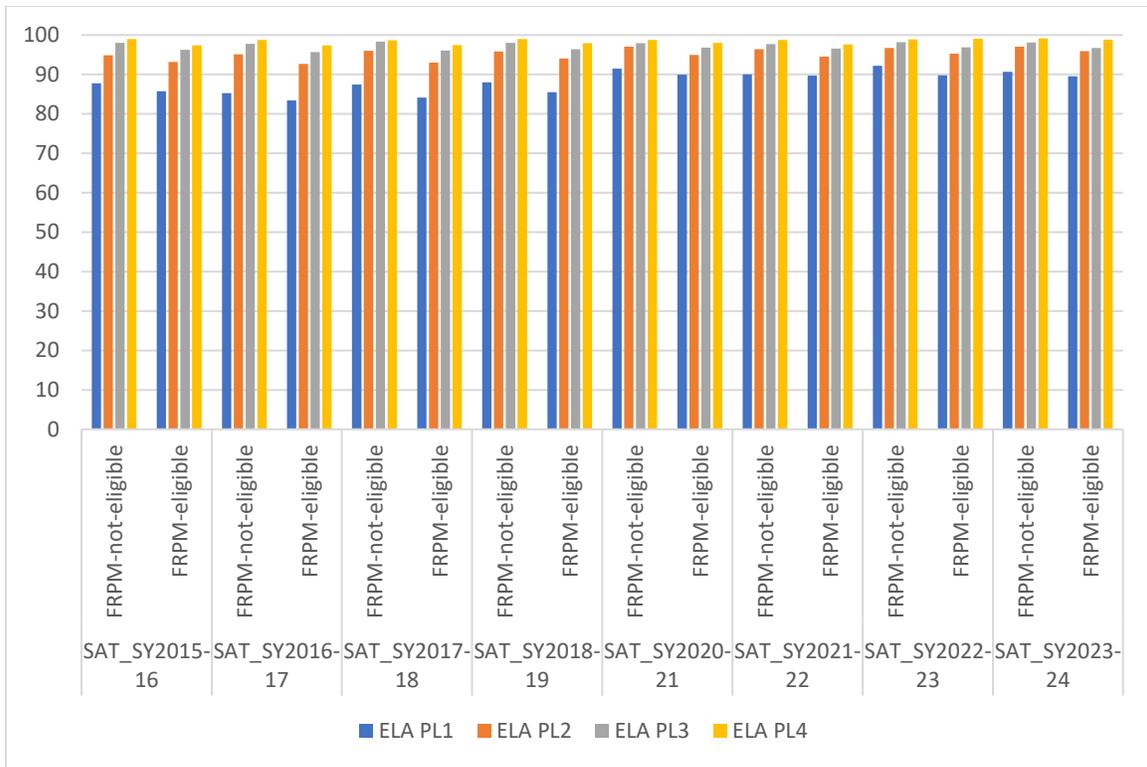


Figure 2: Percentage of Students Earning a Regular HS Diploma by ELA-PL and FRPM Status

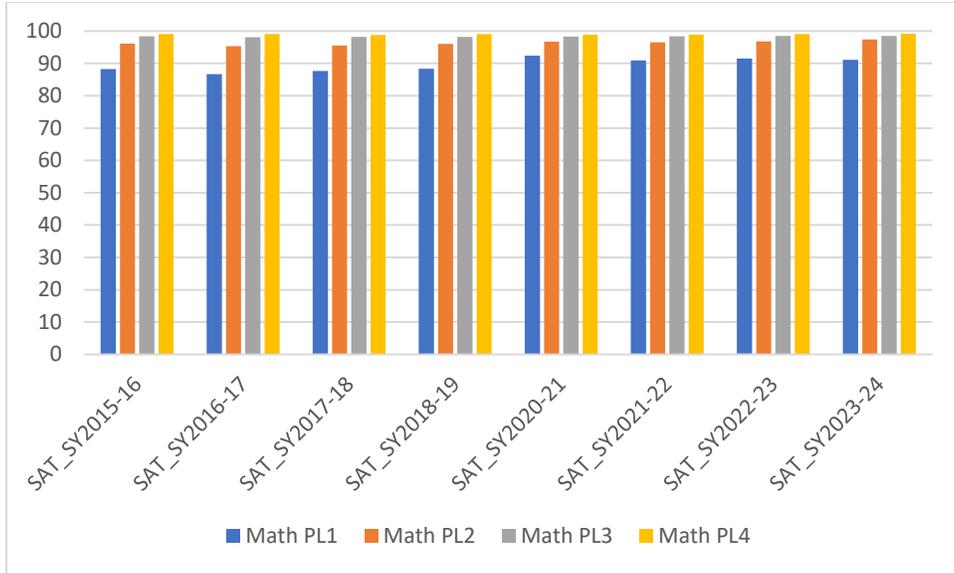


Figure 3: Percentage of Students Earning a Regular HS Diploma by Math PL

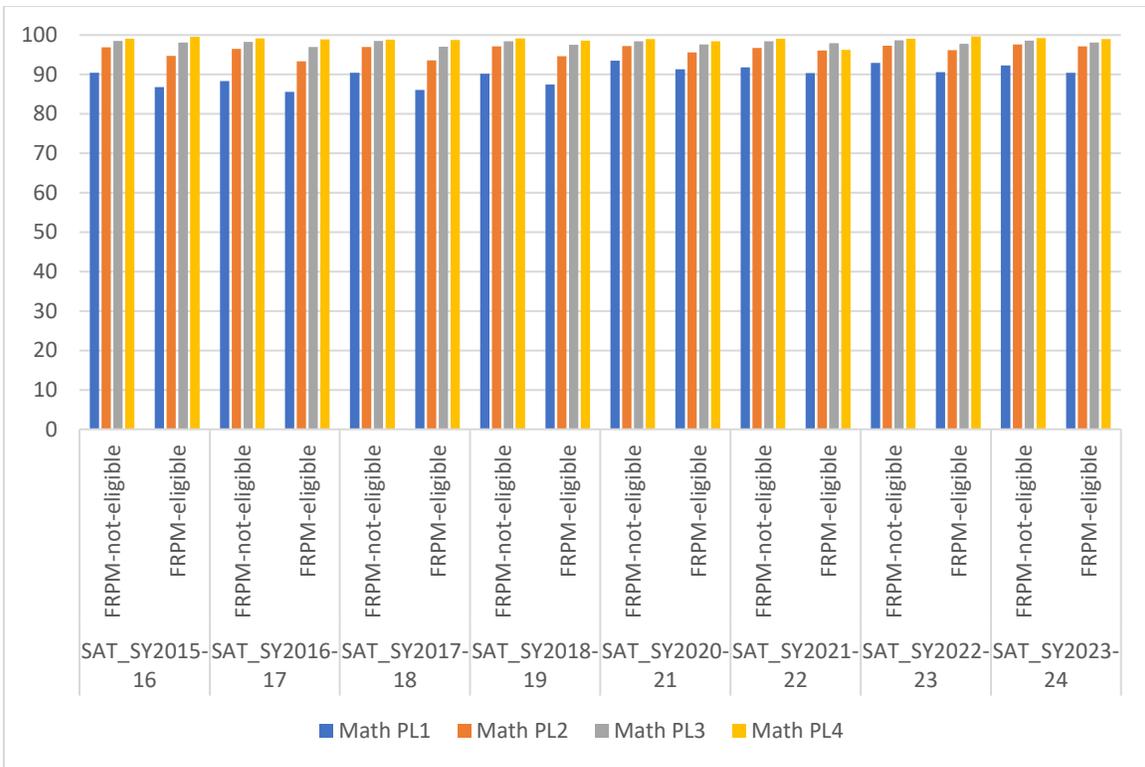


Figure 4: Percentage of Students Earning a Regular HS Diploma by Math-PL and FRPM Status

Students at Performance levels 3 and 4 were more likely to enroll in college.

Figures 5-8 show the college enrollment rate for each cohort by their CT SAT School Day performance level in ELA and Math respectively. Since a high school diploma is a standard

prerequisite for college entrance, this analysis examined the percentage of high school graduates who enrolled in college. The results show that the likelihood of college enrollment after high school graduation increases for students functioning at the next higher performance level. This pattern holds for both ELA and Math performance levels. The pattern also holds when the data are disaggregated based on the student’s FRPM eligibility status.

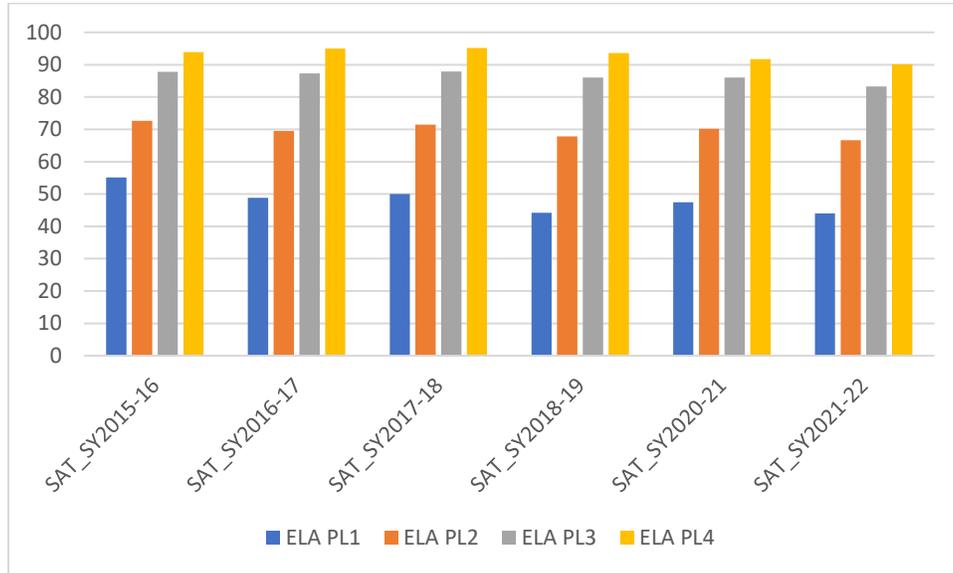


Figure 5: College Enrollment Rate by ELA PL

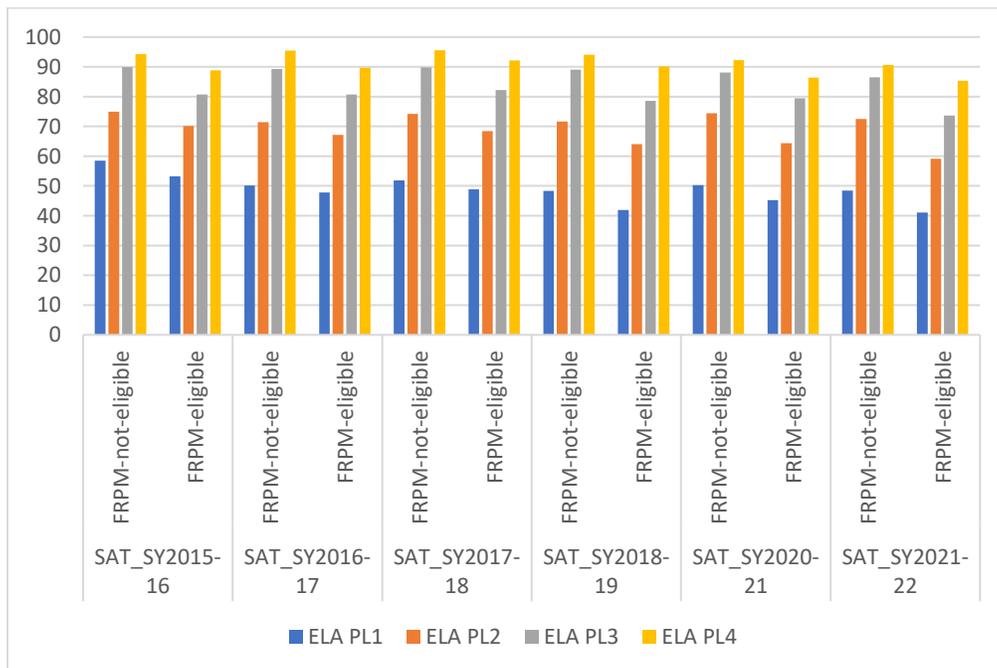


Figure 6: College Enrollment Rate by ELA-PL and FRPM Status

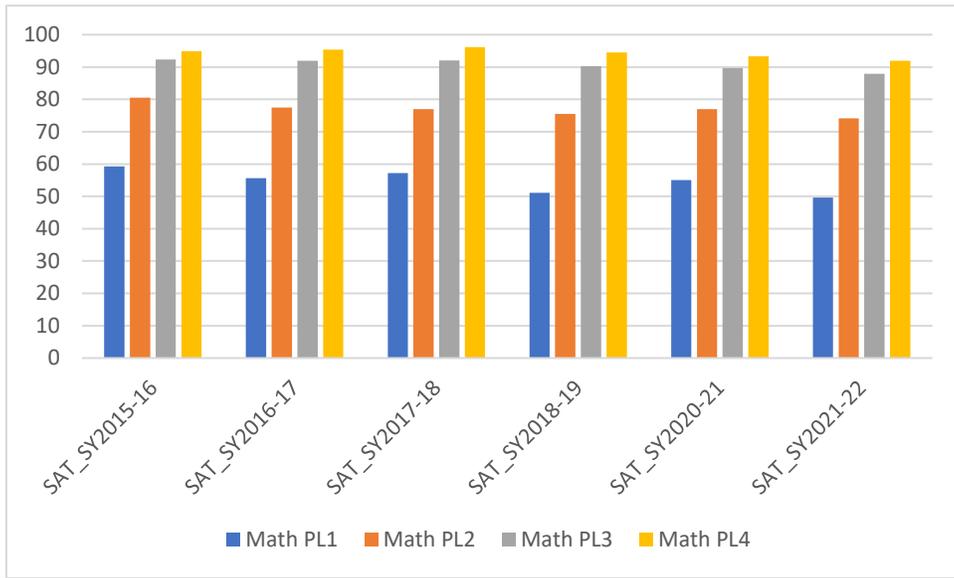


Figure 7: College Enrollment Rate by Math PL

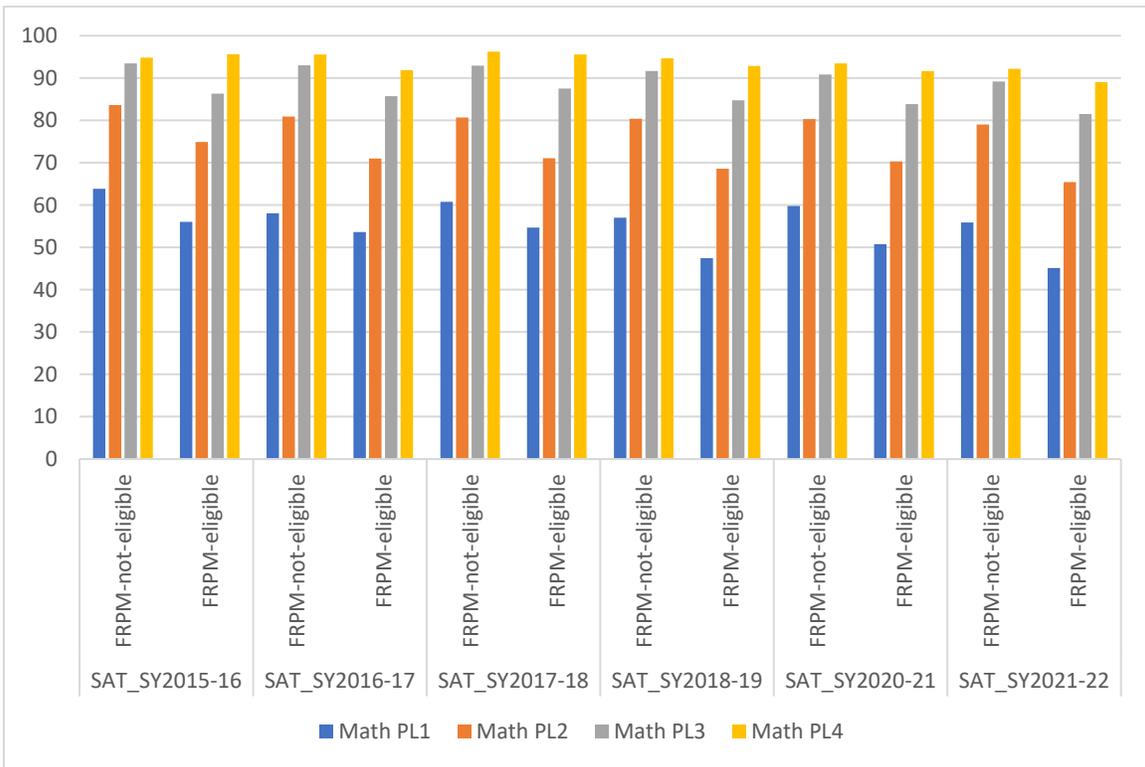


Figure 8: College Enrollment Rate by Math-PL and FRPM Status

Students at Performance Levels 3 and 4 were more likely to complete college in six years. Figures 9-12 show the percentage of students who completed college within six years after they graduated from high school. As with high school graduation and college entrance, these results show that the likelihood of earning a college credential within six years after high school graduation increases for students functioning at the next higher performance level. This pattern holds for both ELA and Math performance levels. The pattern also holds when the data are disaggregated based on the student's FRPM eligibility status.

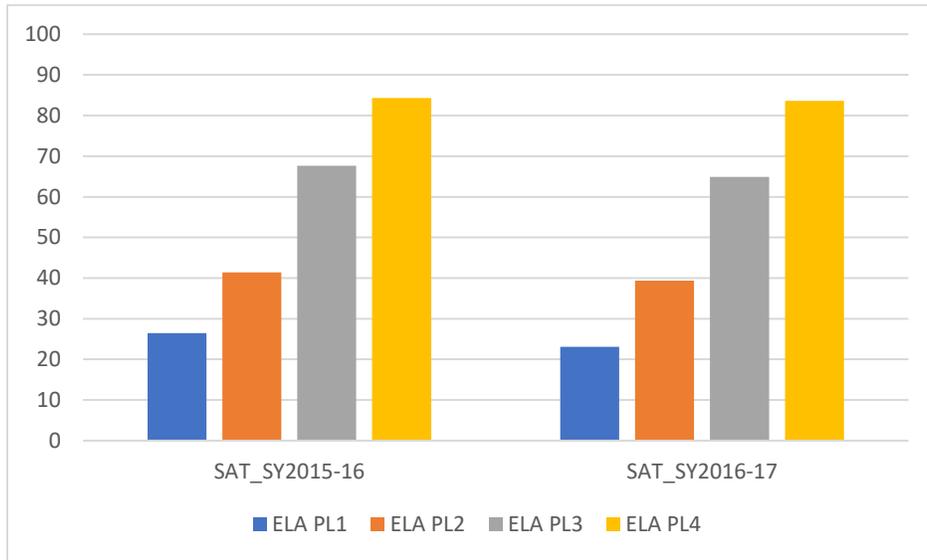


Figure 9: 6-year College Completion Rate by ELA PL

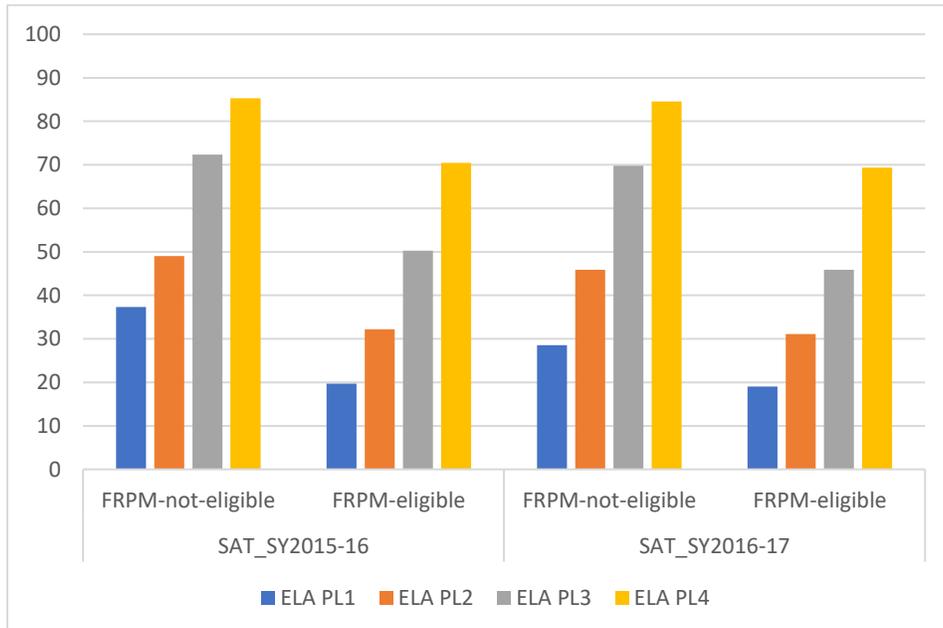


Figure 10: 6-year College Completion Rate by ELA-PL and FRPM Status

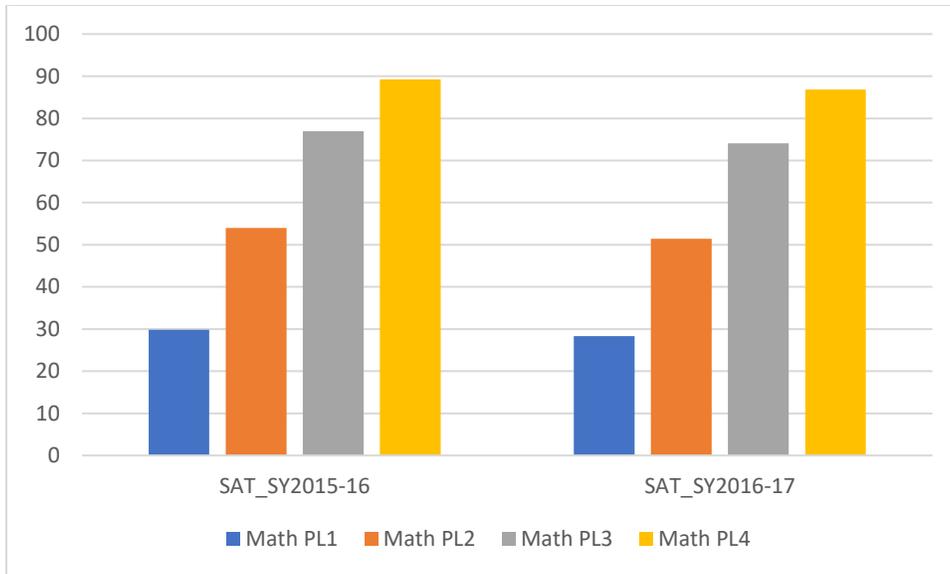


Figure 11: 6-year College Completion Rate by Math PL

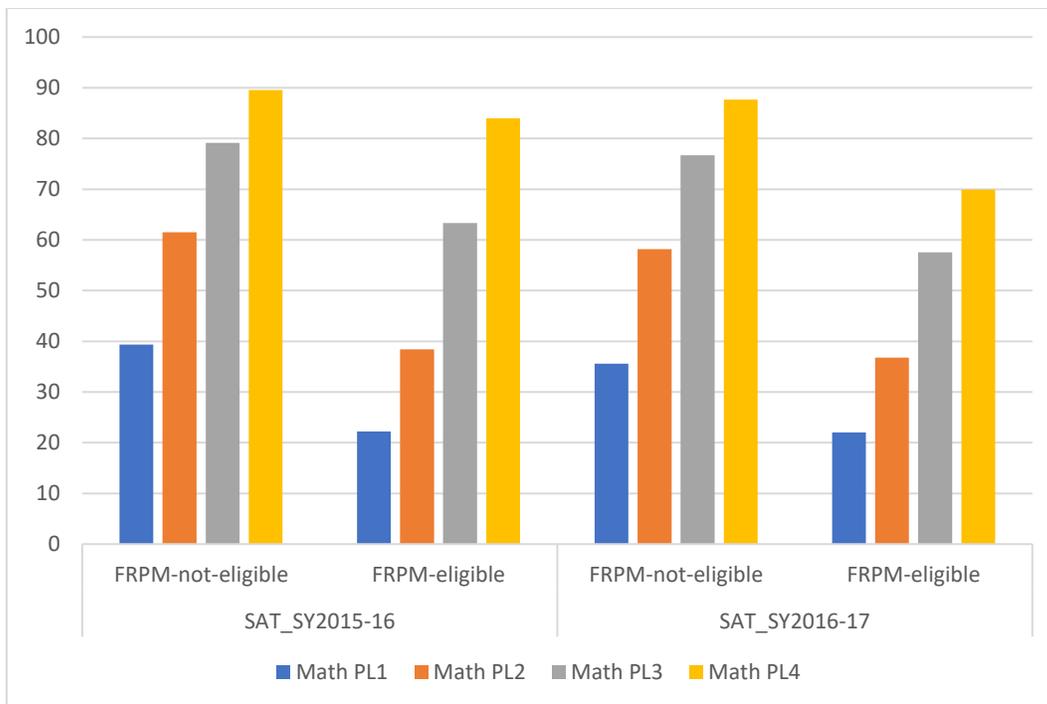


Figure 12: 6-year College Completion Rate by Math-PL and FRPM Status

Students at higher performance levels had higher labor force earnings.

Figures 13-16 show the annual earnings of the 2015-16 and 2016-17 Connecticut SAT School Day test takers in the 5-7 years after they graduate high school, up to money earned in calendar year 2024. The data indicate that students at performance levels 3 and 4 are more likely to have higher annual earnings beginning 5-6 years after high school. However, in the first four years, those in the

higher SAT performance levels earn less, likely because they are still attending college during those years.

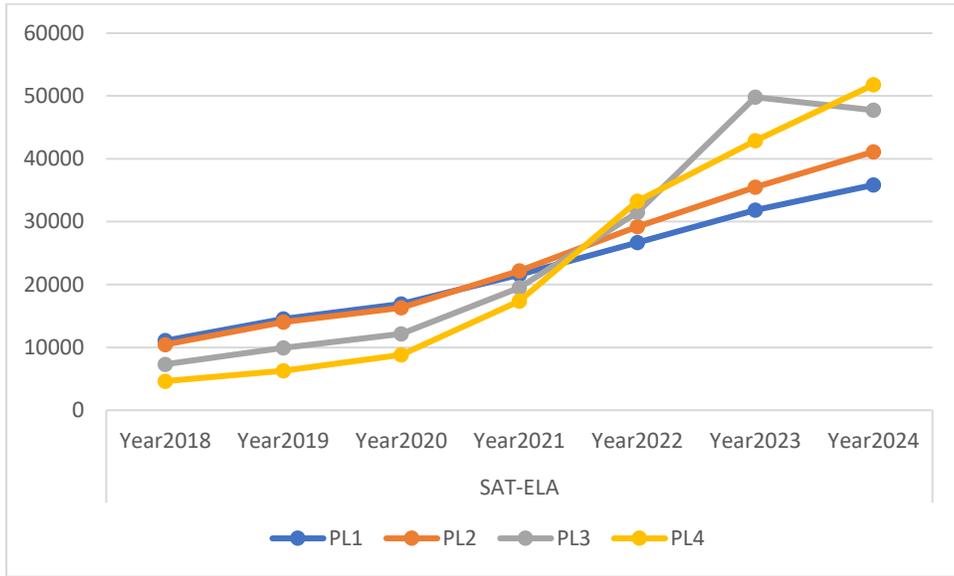


Figure 13: Annual Earnings of the cohort taking SAT School Day in SY2015-16 by ELA PL

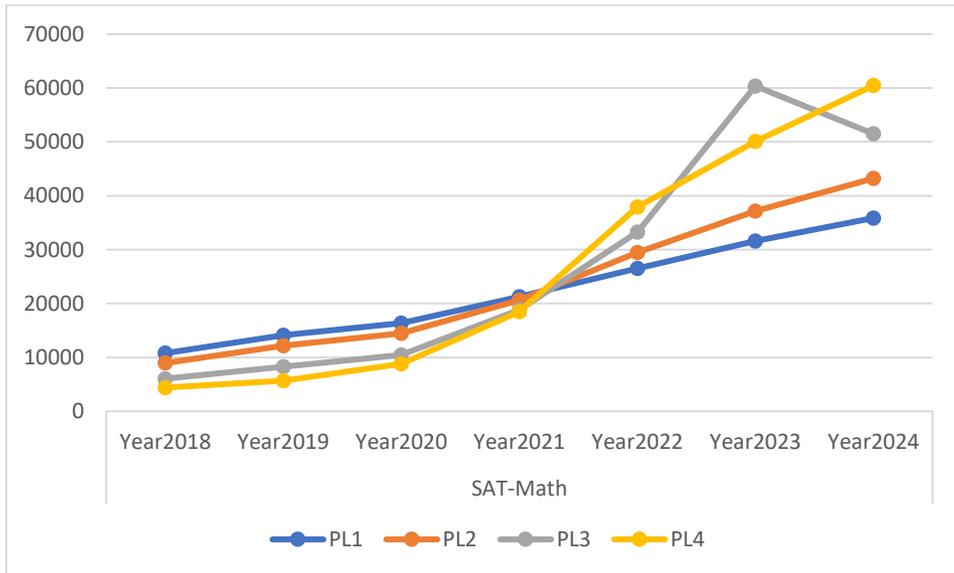


Figure 14: Annual Earnings of the cohort taking SAT School Day in SY2015-16 by Math PL

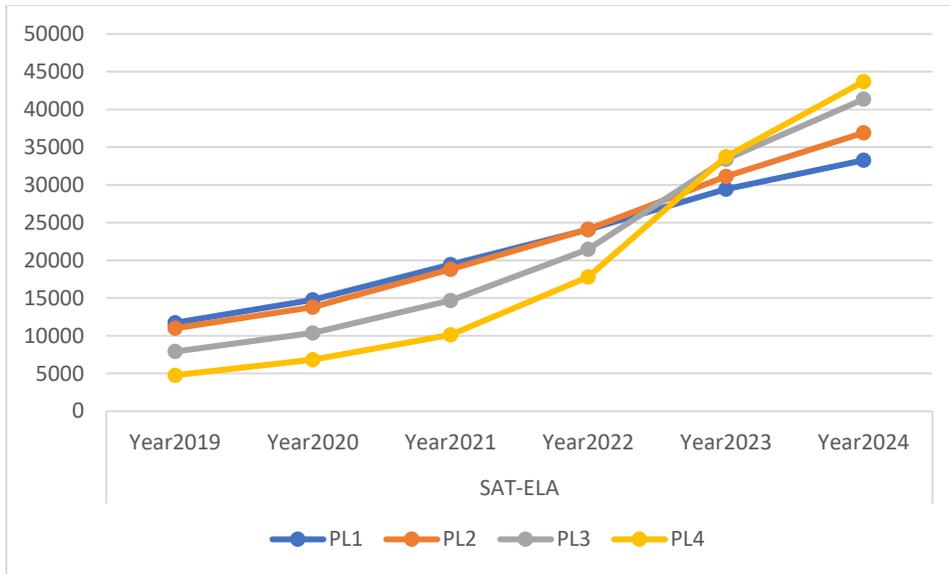


Figure 15: Annual Earnings of the cohort taking SAT School Day in SY2016-17 by ELA PL

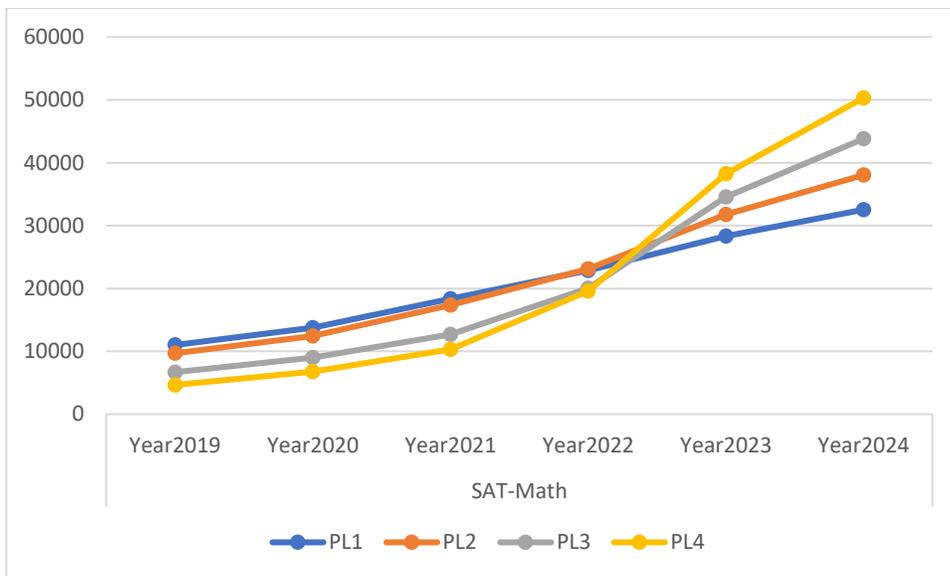


Figure 16: Annual Earnings of the cohort taking SAT School Day in SY2016-17 by Math PL

Conclusion

This study confirms that Connecticut’s academic achievement standards are challenging and are aligned with the post-high-school indicators of success in college and the workforce. Students scoring in higher performance levels on the CT SAT School Day are more likely to graduate from high school with a regular diploma, enroll in postsecondary education, complete college within 6 years after they graduate from high school, and earn higher wages starting in about the 5th year after high school graduation.