SCHOOL EFFECTIVENESS INDEX MANUAL FOR 2021-22

INTRODUCTION

Among the core beliefs of the Dallas ISD is that its main purpose is to improve student academic achievement. One way the district measures schools' ability to improve achievement is with its School Effectiveness Index, or SEI. The SEI is a value-added measure of students' performance on state- and district-mandated tests and the schools' improvement on other variables that support increased student performance.

This manual outlines the method used to compute SEIs by describing the following: selected outcome variables, procedures for establishing school cohorts, procedures for establishing appropriate comparisons, and the equations that make up the SEI model.

OUTCOME VARIABLES

***Note**: For 2021-22, except for SAT and ACT outcome variables, "prior-year" test scores are from MAP Growth given in Fall 2021, due to effects of the COVID-19 pandemic on administration of assessments in the 2020-21 school year.*

Outcome (or dependent) variables used in the Indices model equations are of two types: student-level and school-level. Student-level variables have values for each student and are modeled as dependent on several predictor (or independent) variables, which are described in the *Equations* section of this manual.

School-level variables are computed across all students in the school and are generally represented by percentages. The current-year variable is modeled as dependent on statistics from the prior two years, so that emphasis is on continuous improvement (an "upward trend") relative to other schools in the Dallas ISD. In lists below, school-level variables are specifically identified. All others are student-level variables.

An overall SEI is computed for a school that has at least 15 possible outcome variables and results for at least 50 percent of the outcome variables for its school type (elementary, middle, etc.). The following are outcome variables considered in the computation of SEIs:

ELEMENTARY SCHOOLS

- Grades 1-2: Winter and Spring NWEA *MAP Growth* scores in reading and mathematics. English and Spanish scores are used. Schools must follow district policies for testing Emergent Bilingual (EB) and Special Education students.
- Grades 3-6: Reading, mathematics, and science scores from the *State of Texas Assessment of Academic Readiness 3-8,* or *STAAR 3-8,* as available for each grade. English and Spanish scores are used. Schools must follow district and state policies for testing EB and Special Education students
- Grades 3-6: First and second semester *Assessment of Course Performance (ACP)* scores in reading, language arts, mathematics, science, social studies, computer science, and health (as available). English and Spanish scores are used. Schools must follow district testing policy for testing EB and Special Education students.

MIDDLE SCHOOLS

- Grades 6-8: Reading, mathematics, science, and social studies scores from the *STAAR 3-8,* as available by grade
- Grade 8: Algebra I from the *STAAR End-of-Course,* or *STAAR EOC*
- Grades 6-8: First and second semester *ACP* scores in reading, language arts, mathematics, science, social studies, foreign languages, computer science, and health (as available). Schools must follow district policy for testing EB and Special Education students
- Grades 6-8: Percentage of students enrolled in honors courses[1]

HIGH SCHOOLS

- English I, English II, Algebra I, Biology, and U.S. History scores from the *STAAR EOC*
- First and second semester *ACP* scores in language arts (including ESL), reading, mathematics, social studies, science, foreign languages, and health. Schools must follow district policy for testing EB and Special Education students
- Grade 12: Reading, writing, and mathematics scores from the *SAT* and English, reading, mathematics, and science scores from the *ACT*.[2] The latest available scores, from any high school year, are used
- Critical reading, mathematics, and writing scores on the current-year *PSAT*
- Percentage of students enrolled in honors or *IS* courses[1]
- Percentage of students enrolled in *AP*, *IB, or dual-credit* courses[1]
- Average score on *AP* tests[1,2]

ESTABLISHING SCHOOL COHORTS

Since comparable improvement is based on student outcomes (once a school has qualified), it is important to specify which students will be included in the cohorts. Students included in the school cohort are those who were scheduled and in attendance for a minimum amount of time that is specific to the test in question; were eligible to be tested in accordance with the Dallas ISD Testing Policy; and have the necessary prior-year and current-year test results.

Scheduling and attendance requirements vary by assessment. A student's score is not incorporated into the SEI unless the student met scheduling and attendance requirements. For most tests, the requirements are for the school in general. For *STAAR EOC*, a student's score is not used in the SEI model unless the student *also* meets scheduling and attendance requirements in an appropriate course. An appropriate course is one in which the curriculum describes instruction (including remediation) of knowledge and skills that are assessed by the test in question. For *ACPs* as well, in addition to overall scheduling and attendance requirements at the school, the student must have been scheduled specifically in the appropriate course for the assessment.

[1] School-level variable

[2] This outcome included if current-year data are available at the time SEIs are computed.

Students must be scheduled at the school or in an appropriate course by the start day of the assessment-relevant test term. Students must also be in attendance at least 85 percent of instructional days during a test term. Absences, withdrawals, or transfers to another campus result in "absences." (See Appendix A for test-specific attendance requirements.)

Thus, to be included as a member of a school's cohort, a student's schedule and attendance must conform to parameters, the student must have sufficient pre-observation data, and the student must be tested in that school in accordance with Dallas ISD testing policy.

EQUATIONS

The district's school effectiveness methodology quantifies a school's effectiveness on a continuum. At the high end are schools whose students demonstrate performance that is exceptionally above the performance of similar district students and whose school-wide trends (such as in graduation rates) are more positive than other schools. When a school's population departs markedly from its recent trend or from the more general trend of similar students throughout the district, this departure is attributed to school effect. The measurement of a school's effect in this system involves the examination of *districtwide* student performance on each outcome variable, calculation of statistical expected values for *individual* student performance (or schools, for some outcome variables), and determination of the extent to which the school's students exceed or fall short of their expected values.

SEI procedures involve multi-level regression analyses to compute prediction equations by grade level or by school type for each outcome variable independently of school identification. The equations are used to obtain mean gains over (or losses under) predictions. Multi-level regression analyses produce a reliability-adjusted estimate of the SEI. The reliability adjustment is a shrinkage adjustment in which the SEI is shrunk towards the overall district mean if its reliability is too low. A feature of the SEI calculation process is the assignment of weights to each of the outcomes, with weights determined by the Superintendent of Schools (Appendix B). After weighted levels of performance have been determined, the final computation results in a value that indicates of the degree of a school's improvement in relation to other district schools.

Important characteristics of the methodology include:

- Schools are only held accountable for the performance of students who have been exposed to that school's instructional program. That is, schools are only held accountable for students who were scheduled and in attendance for a minimum amount of instructional time.

- Potential effects of "background" variables over which schools have no control are eliminated through use of established statistical procedures. The inclusion of background variables in the SEI models "levels the playing field" for schools and addresses practitioners' concerns about the impact of these background variables on student outcomes. Student-level background variables that are controlled for include gender, EB status, Gifted and Talented (GT) status, Special Education (SPED) status, socioeconomic status as indicated by participation in federal free/reduced-price lunch programs, and several of the interactions among these student-level variables. Also included are student-level U.S. Census variables that include median household income in the student's Census tract, percentage of adults over 25 with a college degree in the student's Census tract, and percentage of persons living below the federal poverty level in the student's Census tract.

- Schools are not advantaged by starting with high-scoring or low-scoring students. The equations result in individualized predictions for a student based on that student's scores on the prior-year tests of interest. Lower-scoring students have lower predicted scores in the following year. Higher-scoring students have higher predicted scores in the following year.

- Historical data from only the prior year are used for equations involving student-level scores. A hierarchical linear modeling approach is used so that in most cases, satisfactory prediction is achieved with data from only the prior year. This practice maintains "degrees of freedom" for the model, an important statistical consideration for the adequacy of the model. In an urban district with high student mobility (both in and out of the district), the inclusion of additional years of data significantly reduces the degrees of freedom associated with the equations.

APPENDIX A: TEST-SPECIFIC ATTENDANCE REQUIREMENTS BY SCHOOL CALENDAR

BASE CALENDAR

2021-22 Test	First Day	Last Day	Minimum Attendance	Maximum Absences
***ACPs* during first semester**	October 1	December 10	38	6
Winter *MAP Growth*	October 1	January 11	46	8
***STAAR EOC* English I-II**	October 1	April 4	88	15
***STAAR 3-8* Reading** ***STAAR 3-8* Math** ***STAAR 3-8* Social Studies** ***STAAR 3-8* Science** ***STAAR EOC* Algebra I** ***STAAR EOC* Biology** ***STAAR EOC* U.S. History**	October 1	May 2	102	18
***ACPs* during second semester**	January 18	May 2	54	9
Spring *MAP Growth*	January 18	May 2	54	9

INTERSESSION CALENDAR

2021-22 Test	First Day	Last Day	Minimum Attendance	Maximum Absences
***ACPs* during first semester**	October 1	December 10	33	6
Winter *MAP Growth*	October 1	January 11	42	7
***STAAR EOC* English I-II**	October 1	April 4	77	13
***STAAR 3-8* Reading** ***STAAR 3-8* Math** ***STAAR 3-8* Social Studies** ***STAAR 3-8* Science** ***STAAR EOC* Algebra I** ***STAAR EOC* Biology** ***STAAR EOC* U.S. History**	October 1	May 2	91	16
***ACPs* during second semester**	January 18	May 26	62	11
Spring *MAP Growth*	January 18	May 26	62	11

SCHOOL DAY REDESIGN #1 CALENDAR

2021-22 Test	First Day	Last Day	Minimum Attendance	Maximum Absences
***ACPs* during first semester**	October 1	December 10	37	6
Winter *MAP Growth*	October 1	January 11	45	8
***STAAR EOC* English I-II**	October 1	April 4	86	15
***STAAR 3-8* Reading** ***STAAR 3-8* Math** ***STAAR 3-8* Social Studies** ***STAAR 3-8* Science** ***STAAR EOC* Algebra I** ***STAAR EOC* Biology** ***STAAR EOC* U.S. History**	October 1	May 2	100	18
***ACPs* during second semester**	January 18	May 26	68	12
Spring *MAP Growth*	January 18	May 26	68	12

SCHOOL DAY REDESIGN #2 CALENDAR

2021-22 Test	First Day	Last Day	Minimum Attendance	Maximum Absences
***ACPs* during first semester**	October 1	December 10	35	6
Winter *MAP Growth*	October 1	January 11	43.5	7.5
***STAAR EOC* English I-II**	October 1	April 4	82	15
***STAAR 3-8* Reading** ***STAAR 3-8* Math** ***STAAR 3-8* Social Studies** ***STAAR 3-8* Science** ***STAAR EOC* Algebra I** ***STAAR EOC* Biology** ***STAAR EOC* U.S. History**	October 1	May 2	95.5	17.5
***ACPs* during second semester**	January 18	May 26	65	11.5
Spring *MAP Growth*	January 18	May 26	65	11.5

APPENDIX B: WEIGHTS OF OUTCOME VARIABLES

Grade:	1	2	3	4	5	6	7	8	9	10	11	12
Winter and Spring *MAP Growth*												
Reading	8	8										
Mathematics	8	8										
STAAR 3-8 (English or Spanish)												
Reading			8	8	8	8	8	8				
Mathematics			8	8	8	8	8	8				
Science					8			8				
Social Studies								8				
STAAR EOC												
English I/II									8/test			
Algebra I								8	8			
Biology									8			
U.S. History									8			
ACP												
Reading/Language Arts (incl. ESL)			2	2	2	2	8	8	8			
Mathematics			2	2	2	2	8	8	8			
Science					2	2	8	8	8			
Social Studies						2	8	8	8			
World Languages							2		2			
Computer Science						2						
Health								2	2			
***AP* (and Pre-*AP*)**												
Honors Enrollment						2			4			
*AP/IB/*DC Enrollment										5		
AP Exams (average score)									3			
College Readiness Exams												
PSAT Reading Scores									1			
PSAT Mathematics Scores									1			
PSAT Writing Scores									1			
SAT EBRW Scores												2
SAT Mathematics Scores												2
ACT Reading Scores												1
ACT English Scores												1
ACT Mathematics Scores												1
ACT Science Scores												1