2017 Texas Public School Rankings Methodology

May 2017

Robert Sanborn, Ed.D.
Andy Canales, M.S.Ed.
Shay Everitt, MSW
David McClendon, Ph.D.
Katie McConnell, Ed.D.
Kellie O'Quinn, MSW
Claire Treacy

I. Introduction

A. About CHILDREN AT RISK

CHILDREN AT RISK is a 501(c)3 non-profit, non-partisan research and advocacy organization dedicated to addressing the root causes of social problems impacting Texas children through research, education, advocacy, and public policy. The organization began in the fall of 1989 when a group of child advocates met to discuss the lack of documentation on the status of children and the absence of strong public policy support for youth. Over the course of more than two decades, CHILDREN AT RISK has evolved from an organization researching the multitude of obstacles Texas children face to one that also drives macro-level change to improve the future of our state through community education, collaborative action, evidence-based public policy, and advocacy for our youth at the local and state level. Through its Public Policy and Law Center—established in 2006 as the only center of its kind in Texas—CHILDREN AT RISK uses policy and legal expertise as a powerful tool to drive change and create a better future for our children. In recent years, CHILDREN AT RISK has grown exponentially in its capacity to speak out and drive change for children and has become a premier resource for children's issues among major media outlets, public officials, and the non-profit sector. Today, the mission of CHILDREN AT RISK is to improve the quality of life for children across Texas through strategic research, public policy analysis, education, collaboration, and advocacy.

The school ranking system, first developed by CHILDREN AT RISK in 2006, highlights the successes as well as need for improvement of public schools. As a research and advocacy organization, the purpose of the rankings is not only to provide a tool for parents and students, but also to provide information for campuses and districts on how they perform relative to their peers, comparing them against successful models of high-performing public schools. In 2009, CHILDREN AT RISK began to include all eligible high schools in the state of Texas and extended the ranking system to include eligible elementary and middle school campuses. Thus far, the CHILDREN AT RISK rankings have proven to be instrumental in generating conversations among educators and the public regarding methods for improving our public education system. In addition, the School Rankings aim to:

- Serve as an accessible guide for parents, educators, and community members on the performance of local schools.
- Generate conversations not just about the data used in the ranking, but around how schools and districts are performing overall in creating college-ready students.
- Be transparent. Research is strongest when it is made available to the public and open to scrutiny. Thus, discussion can be generated, the ranking methodology can be improved, and all districts can utilize this avenue of assessing campuses.
- Encourage the use of data in public school reform. The rankings have successfully promoted data analysis at the campus and district level, targeted school intervention, aided teacher and staff professional development, allocated funds to better serve children, and supported changes in strategic planning.

Each year, CHILDREN AT RISK reexamines its methodology of ranking schools to ensure that the rankings most accurately reflects school performance, utilizes the most appropriate data available, and incorporates feedback from educators, researchers, and service providers.

B. Collaboration
The Growth Score Index for the 2017 School Rankings was calculated in conjunction with Dr. Lori Taylor of Texas A&M University.

II. Methods

A. School Ranking Overview
All elementary and middle school campuses in Texas are ranked across three indices: Student Achievement, Campus Performance, and Growth. High schools are ranked across four indices: Student Achievement, Campus Performance, Growth, and College Readiness. Within each index, a weighted index score is calculated for each campus. Using the three index scores, a weighted average is computed to create an overall composite index. A state rank is determined as the order in which campuses are listed when the weighted composite indices are sorted from highest to lowest, relative to other schools servicing the same grade levels (i.e., Elementary, Middle, High). A letter grade is then assigned based on the campus' ranked composite score.

B. Indices
Student Achievement Index
The Student Achievement Index reflects raw performance in key academic areas. The Student Achievement Index accounts for 60% of elementary and middle school campuses' overall rank and 30% of high school campuses' overall rank. The percentage of students at an elementary or middle school campus who took and passed the STAAR Reading Exam at Level III Advanced for their respective grade level account for 50% of the Student Achievement Index. The percentage of students at an elementary or middle school campus who took and passed the STAAR Math Exam at Level III Advanced for their respective grade level account for the other 50% of the Student Achievement Index. For high school campuses the percentage of students who took and passed the English I or English II STAAR End of Course Exam at Level III Advanced for their respective grade level account for 50% of the Student Achievement Index. The percentage of high school students who took and passed the Algebra I STAAR End of Course Exam at Level III Advanced account for the other 50% of the Student Achievement Index.

In an effort to create a clear standard for how to receive an "A" CHILDREN AT RISK letter grade, we added an additional component beginning in 2017. All schools with at least 33% of their students performing at STAAR Level III Advanced in both Reading and Math automatically receive an "A" in the CHILDREN AT RISK School Rankings. The 33% benchmark was determined through year over year analysis of previous data which showed this was the average Student Achievement of "A" schools across the state.

ELEMENTARY AND MIDDLE SCHOOL STUDENT ACHIEVEMENT INDICATORS	
STAAR Reading- Advanced	50%
STAAR Math- Advanced	50%

HIGH SCHOOL STUDENT ACHIVEMENT INDICATORS	
STAAR Reading- Advanced	*50%*
STAAR Math- Advanced	*50%*

For each indicator (e.g., STAAR Reading- Advanced), campuses are ordered highest to lowest by their score and a percentile rank is calculated. The percentile rank indicates the percentage of scores that fall at or below that score. Each indicator, as demonstrated above, has a pre-determined weight; the weighted average of these percentiles is the Student Achievement Index.

Campus Performance Index
The Campus Performance Index captures performance on the Student Achievement indicators using values adjusted for the percentage of economically disadvantaged students at each campus. Raw academic measurements, such as those in the Student Achievement Index, have a bias toward campuses with low percentages of economically disadvantaged students. The Campus Performance Index is created to measure the effectiveness of the educators and programs at a campus independent of the differences in the percentage of economically disadvantaged students at each campus. The Campus Performance Index accounts for 20% of elementary, middle, and high school campuses' overall rank.

The Campus Performance Index utilizes linear regression analysis to demonstrate the relationship between the percentage of economically disadvantaged students and their performance on the indicators that compose the Student Achievement Index. Using the regression analysis, a campus' deviation from its expected score is calculated. Deviation from the expected value is defined as the difference between the actual pass rate of a campus and its forecasted pass rate as defined by the regression line in the analysis. Each campus receives a positive or negative deviation score. A positive deviation score indicates a campus performed better than anticipated, while a negative deviation score indicates a campus performed worse than anticipated given the percentage of economically disadvantaged students at their respective campus.

Campuses are ordered highest to lowest by their deviation score and a percentile rank is calculated. A campus' percentile rank indicates the percentage of scores that fall at or below their given Campus Performance Index score. Each indicator had the same pre-determined weight as the Student Achievement Index and the weighted average of these percentiles is the Campus Performance Index.

ELEMENTARY AND MIDDLE SCHOOL CAMPUS PERFORMANCE INDICATORS	
STAAR Reading- Advanced (Economically Adjusted)	50%
STAAR Math- Advanced (Economically Adjusted)	50%

HIGH SCHOOL CAMPUS PERFORMANCE INDICATORS	
STAAR Reading- Advanced (Economically Adjusted)	*50%*
STAAR Math- Advanced (Economically Adjusted)	*50%*

Growth Index

The Growth Index captures improvement over time in standardized test scores. The Growth Index accounts for 20% of elementary, middle, and high school campuses overall rank. The Growth Index is composed of gain scores in math and reading, which measure student-level performance relative to a student's test-score peers. A student's test-score peers are other students, statewide, who took the same grade and subject-matter test the previous year and received the same score. Thus, the peer group for a 6th grade math student who scored a 20 on the 5th grade STAAR Math test is all students across the state that also scored a 20 on the 5th grade STAAR Math test.

The year-to-year difference is standardized, and then transformed into a normal curve equivalent score for ease of interpretation. A normal curve equivalent score is a version of a standardized score that can be interpreted as percentile ranks in a normal distribution. A campus' math gain score is an average of the individual student math gain scores; a campus' reading gain score is an average of the individual students reading gain scores. In the rare instance that a campus' gain score could not be calculated for one subject the other subject gain score is used for both gain scores. In the event that neither a math nor a reading gain score could be calculated for a campus they were dropped from the rankings.

The exams utilized to calculate the gain scores are the same exams utilized to calculate the Student Achievement Index and the Campus Performance Index in the gain score calculations include: STAAR Reading, STAAR Math, English I EOC, English II EOC, and Algebra I EOC.

For each indicator (e.g., Reading gain score), campuses were ordered highest to lowest by their score and a percentile rank was calculated. The percentile rank indicates the percentage of scores that fall at or below that score. The average of the two percentiles became the Growth Index.

ELEMENTARY AND MIDDLE SCHOOL GROWTH INDICATORS	
Reading Gain Score	50%
Math Gain Score	50%

HIGH SCHOOL GROWTH INDICATORS	
Reading Gain Score	*50%*
Math Gain Score	*50%*

College Readiness Index (High School Only)
The College Readiness Index measures college readiness of high school students at a given campus. The College Readiness Index accounts for 30% of high school campuses' overall rank. Included in College Readiness Index is the CHILDREN AT RISK graduation rate, the participation rates for SAT/ACT and AP/IB exams, average SAT and ACT composite scores, and the percent of examinees above the AP/IB criterion score. As with other indices, each indicator is ranked highest to lowest and transformed into a percentile rank. Each indicator has a pre-determined weight, and the weighted average of these indicators becomes the College Readiness Index.

CHILDREN AT RISK Graduation Rate
CHILDREN AT RISK tracks first-time freshman who entered high school in the 2009-2010, 2010-2011, or 2011-2012 school year. The three cohorts are followed to determine the percentage of students that have graduated from a Texas public high school by May 2015. The cohorts of students tracked are the cohorts established by TEA and must meet the TEA graduation, dropout, and completion rates for state and federal accountability standards. In the graduation rates calculated by TEA students who leave a Texas public high school due to death, homeschool, private school, or another school outside of Texas are dropped from the original freshman cohort under the assumption they are completing their education at another institution or are unable to due to death. CHILDREN AT RISK, however, only excludes students that leave a Texas public high school due to death or homeschool. Thus, the CHILDREN AT RISK graduation rates do not account for the small percentage of students leaving Texas high schools for a private school or a school outside of Texas. For each campus the highest of the four-, five-, or six-year graduation rate is assigned to a campus as their graduation rate for the school rankings analysis.

Due to TEA's need to protect student privacy, some student data is masked. For example if 5 or fewer students left a school due to death or homeschool, a masked value is given. CHILDREN AT RISK substituted the masked value with 2.5, the mean of the possible value. At times these substitutions resulted in a graduation rate greater than 100%. In these cases, a school's final graduation rate was rounded down; they were assigned a graduation rate of 100%.

HIGH SCHOOL COLLEGE READINESS INDICATORS	
C@R Graduation Rate	*60%*
SAT/ACT Participation Rate	*10%*
AP/IB Participation Rate	*10%*
% Examinees Above AP/IB Criterion Score	*10%*
Average SAT Total Score	*5%*
Average ACT Composite Score	*5%*

C. Letter Grades

All campuses were assigned a letter grade, based on their Composite Index. For elementary, middle, and high schools:

- Campuses at or above the **75th percentile** (indicating they rank better than at least 75% of schools serving the same grade levels) received an "**A**."
- Campuses at or above the **55th percentile**, but below the 75th percentile, received a "**B**."
- Campuses at or above the **35th percentile**, but below the 55th percentile, received a "**C**."
- Campuses at or above the **15th percentile**, but below the 35th percentile, received a "**D**."
- Campuses below the **15th percentile** received an "**F**."

Once campuses are assigned a general letter grade, "A," "B," and "C" grades were further differentiated into plus/minus grades (e.g., "A+"). The range of Composite Index scores for each letter grade was divided evenly into thirds. The top third of Composite Index scores became "plus" grades and the bottom third of Composite Index scores became "minus" grades. The cut-points are different for elementary, middle, and high schools because they are based on the unique sample of scores for the year's schools at each level.

III. Data and Limitations

A. Data Collection Overview

The data utilized in the school rankings analysis is collected by the Texas Education Agency (TEA). CHILDREN AT RISK receives a portion of the data directly from TEA through a public information request to the TEA data department. The other portion of the data utilized is downloaded from TEA's publically available database, *STAAR Aggregate Data*, available here CHILDREN AT RISK merges all of the data by campus ID number to create a comprehensive school profile in order to conduct the analysis.

The STAAR exam data utilized in the 2017 School Rankings analysis is from the 2015-2016 school year. A small portion of students across Texas take modified versions of the STAAR exam, CHILDREN AT RISK does not include data on any of the modified STAAR exams in the school rankings analysis. The analysis does include students who take the STAAR exam more than once, not only those that pass at first attempt. Additionally, the data includes any student who takes the STAAR exam at a given campus, not only those included in the October enrollment Public Education Information Management System (PEIMS) snapshot.

CHILDREN AT RISK seeks to hold schools accountable for student performance on a variety of indicators including standardized tests, graduation rates, college readiness, and improvement over time, utilizing a holistic approach to our annual examination of school quality. The indicators included, weights applied to each indicator, and the weights applied to each of the indices in the ranking analysis were determined by staff members in conjunction with influential members of the education community across Texas. More weight is given to indicators that better predict college success based on a growing body of research.

B. Campus Classification
CHILDREN AT RISK used traditional grade ranges (elementary school EE-5, middle school 6-8, and high school 9-12) to determine each schools' classification. However, there are many possible grade ranges and many schools fall outside of traditional grade ranges. In response, CHILDREN AT RISK employed a systematic approach to ensure the most comprehensive and accurate picture of school performance relative to school peers is provided by including as many schools as possible.

Schools are ranked in each category in which their data is complete for that particular range. For example, an EE-8th grade school is ranked as both an elementary and middle school, but a 4th-8th grade school would only be ranked as a middle school as their data for elementary would not be complete. This leads to some discrepancies due to the fact that schools will have a different rank in each of the classifications for which they are analyzed and assigned a rank and grade. While we recognize this as a limitation, CHILDREN AT RISK's goal is to provide parents and stakeholders with the most complete picture of school performance possible. For a complete list of possible grade ranges, please see Appendix II.

C. Excluded Schools
For a school to be included in the school rankings, a campus must have complete data profile from the Texas Education Agency (TEA) for each of the indicators included in the analysis. Any campus missing data for one or more indicators is excluded from the analysis. Campuses with fewer than 90 students enrolled are excluded from the rankings as there is not sufficient data to analyze the performance of their campus.

Additionally, campuses under an alternative accountability system from TEA (i.e., disciplinary sites) and campuses confirmed to be undergoing a state or district investigation are also excluded from the annual analysis.

9th Grade Centers
Recently, there has been an increase in campuses that serve a combination of 7th, 8th, 9th, and 10th graders together who then transition into a senior high school upon completion of 9th or 10th grade. The possible grade ranges seen are:
- 7th – 9th
- 8th – 9th
- 9th only
- 9th – 10th

In an effort to provide the most complete picture possible, CHILDREN AT RISK merges these campuses with their respective feeder senior high schools. This is done to prevent dropping these campuses and senior high school campuses due to missing data necessary to calculate the graduation rate. This is only done for campuses where there is a direct feeder pattern from the 9th grade serving campus to the associated senior high school campus.

D. Sub-Lists
After the school rankings analysis is completed at the state level sub-lists are extracted to compare school performance of like campuses based on pre-determined inclusion criteria. Sub-lists include geographic sub-lists for the major metro-areas as well as peer sub-lists comparing schools based social and economic characteristics.

Geographic Sub-Lists
The geographic sub-lists facilitate the comparison of individual campuses in the same major metro areas across Texas. The geographic areas are defined as follows:
- Greater Austin Area (seven counties) – Bastrop, Blanco, Burnet, Caldwell, Hays, Travis, and Williamson
- Greater Houston Area (eight counties) – Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller
- Greater North Texas Area (nine counties) – Collin, Dallas, Denton, Ellis, Hunt, Johnson, Kaufman, Rockwall, and Tarrant
- Greater San Antonio Area (six counties) – Atascosa, Bandera, Bexar, Comal, Guadalupe, and Medina

Gold Ribbon Sub-Lists
The Gold Ribbon sub-lists highlight high-performing, high poverty schools that are traditional neighborhood campuses; magnet schools and charter schools are not included in the Gold Ribbon sub-lists. High poverty schools are identified as campuses that are more than 75% economically disadvantaged. Those campuses that receive an A or a B in the CHILDREN AT RISK rankings are considered high performing, high poverty.

*Additional sub-lists may be added at a later date.

E. Study Limitations

There are numerous factors that affect the success of children and schools. Research shows some of the biggest factors for student success are parental involvement, social and emotional development, teacher quality and delivery of classroom instruction, participation in extracurricular activities, teacher and parent expectations of students, and engaging class work that stimulates critical thinking. However, there is no standard measure for any of these constructs, and it would be particularly difficult to collect these data efficiently and consistently for ranking over 7,000 schools.

Another constraint is CHILDREN AT RISK's dependence on data collected by the TEA. Thus, the limitations posed by TEA data are valid criticisms for the school rankings analysis. Any erroneous data reported to or by TEA may have an impact on the rankings analysis and final results. Additionally, the CHILDREN AT RISK rankings are limited to campuses that have complete data available through TEA for all measures included in the ranking. Campuses without comprehensive data profiles or those with fewer than 90 students are excluded from the rankings despite the quality of their performance.

CHILDREN AT RISK's reliance on STAAR exam data is a limitation in that only non-modified versions of the exam are utilized. It is possible that students taking the Spanish exam or other versions are passing at Level III Advanced, but are not captured in the analysis. Additionally, the performance of high schools on STAAR exams is a limitation, as there are only three required End of Course STAAR exams (Algebra I, English I, and English II). A portion of students take Algebra I in eighth grade; their data is not captured at the high school level due to an inability to tie the individual level data to their high school and the students do not retest in high school.

One final limitation is that all testing data is aggregated for each school, not by grade level. Essentially, this means that all the data for a particular campus is collapsed into one count of students performing at Level III. So, all the reading data for elementary schools would be collapsed into one count even though students take the exam annually.

Appendix I – Table of Indicators for Public School Rankings

ELEMENTARY AND MIDDLE SCHOOLS		
Student Achievement Index		**60%**
STAAR Reading- Advanced	50%	
STAAR Math- Advanced	50%	
Campus Performance Index		**20%**
STAAR Reading- Advanced (Demographically Adjusted)	50%	
STAAR Math- Advanced (Demographically Adjusted)	50%	
Growth Index		**20%**
Reading Gain Score	50%	
Math Gain Score	50%	

HIGH SCHOOLS		
Student Achievement Index		**30%**
STAAR Reading- Advanced	*50%*	
STAAR Math- Advanced	*50%*	
Campus Performance Index		**20%**
STAAR Reading- Advanced (Demographically Adjusted)	*50%*	
STAAR Math- Advanced (Demographically Adjusted)	*50%*	
Growth Index		**20%**
Reading Gain Score	*50%*	
Math Gain Score	*50%*	
College Readiness Index		**30%**
C@R Graduation Rate	60%	
SAT/ACT Participation Rate	10%	
AP/IB Participation Rate	10%	
% Examinees Above AP/IB Criterion Score	10%	
Average ACT Composite Score	5%	
Average SAT Total Score	5%	

Appendix II – Possible Grade Ranges

ELEMENTARY	
Low Grade	**High Grade**
EE	2
EE	3
EE	4
EE	5
EE	6
EE	7
EE	8
EE	10
EE	12
PK	3
PK	4
PK	5
PK	6
PK	7
PK	8
PK	9
PK	12
KG	3
KG	4
KG	5
KG	6
KG	7
KG	8
KG	9
KG	12
1	3
1	4
1	5
1	6
1	12
2	3
2	4
2	5
2	8
3	4
3	5
3	6
3	7
3	8
3	9
3	12
4	5
4	6
5	5
5	6

MIDDLE	
Low Grade	**High Grade**
EE	8
EE	9
EE	10
EE	12
PK	8
PK	9
PK	12
KG	8
KG	9
KG	12
1	12
2	8
3	8
3	9
3	12
4	8
4	12
5	8
5	9
5	12
6	6
6	7
6	8
6	9
6	10
6	11
6	12
7	8
7	12
8	12

HIGH	
Low Grade	**High Grade**
EE	10
EE	12
PK	12
KG	12
1	12
3	12
4	12
5	12
6	10
6	11
6	12
7	12
8	12
9	12
10	11
10	12