2018 School of Distinction Awards

Detailed Methodology

Now in its 12th year, the *School of Distinction* (SOD) awards were created in the summer of 2007 to recognize the highest improving schools in Washington State. The awards are not intended as a replacement for state and federal accountability measures of school performance, but rather as a supplemental measure to recognize and celebrate school staff, students, and leaders who ***improve performance for all students*** over a sustained period of time in English language arts (ELA) and mathematics. The methodology has remained unchanged over the 12 years other than allowing for the transition from Measures of Student Progress (MSP) to Smarter Balanced Assessments (SBA) starting in 2015. This paper presents our approach to the 2018 SOD awards.

The design principles of the *School of Distinction* awards have remained unchanged over 12 years.

- Recognize sustained improvement using five years of improvement in performance data.
- Performance is defined based on two foundational skills—literacy and numeracy. Specifically, results from the state assessments over those five years of data in English language arts (ELA) **and** mathematics.
- Use publicly available data to ensure transparency and ease of interpretation.
- Recognize that across our K-12 system there are different performance characteristics by grade bands (elementary, middle/junior high, and high schools). We will recognize the top 5% in each band for both traditional public schools and in alternative public schools.
- Recognize meaningful improvement: A small number (5%) of schools who have demonstrated sustained improvement in both ELA and math over a 5-year span (elementary and middle/junior high schools) and a sustained improvement in graduation rate (high schools).

Summary of what changed in 2015 due to SBA.

Accurate and Authentic Measure of Improvement with SBA

- **SOD 2018, 2017, 2016 and 2015 uses percentile ranks (normalized data) over 5 years in Reading/English Language Arts and Math** (Elementary & Middle School Awards)**.**

  In the past, percent meeting standard for reading and math was the measure used in SOD. As we saw with the results of SBA in 2015, the percent meeting standard in ELA and math has dropped at all grade levels. Since it's difficult to have "improvement" when the entire state declined at all grade levels due to the use of a different measurement tool, instead of using percent meeting standard as the measure, CEE has translated percent meeting standard to percentile ranks for each year and each content area for each grade level. For example, if a school is at the 65th percentile, then it is performing above 65% of the schools in the state at that grade and subject area.

  These percentiles are calculated for each year by combining ELA and math percentiles. The 5-year trend of improvement for each year is then used to measure improvement (in percentile ranks) over the 5-year period.

- **Use 5-Year graduation rate for High Schools.**

  After consulting with ESD leadership, district leadership, and building principals from around the state, CEE determined that SBA could not be used at the high school level due to the irregularities in the testing (primarily the nearly 50% refusals state wide for HS testing in 2015). The overwhelming recommendation from the field was to use the 5-year adjusted cohort graduation rates and look at improvement in these rates over time.

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Specifics of the methodology used to determine 2018 winners.

Methodology

Note: Data source is the OSPI reported data from the data downloads section of the state report card http://reportcard.ospi.k12.wa.us/DataDownload.aspx.

Elementary and Middle/Junior High School Bands

- Three grade bands are used for calculation. For elementary schools—grades 3, 4, and 5. For middle/junior high schools—grades 6, 7, and 8. A school must have data in two of three grades in each year to be considered for that level in that year.
- Across the 5 years, a school must have data in 2018 and at least two other years (for a total of 3 years of data).
- For each year, CEE created a normalized data set for ELA and math. Normalization places each school relative to the others based on the median for all the schools in the state with data at each grade level. The median represents the 50th percentile. Each school's data is then used to determine their percentile rank for that year, in that grade, in each content area.
- This "normalized" view enables us to calculate a trend of improvement over the 5 years. For example, a School that was at the 35th percentile in 2013, the 40th percentile in 2014, the 45th percentile in 2015, the 50th percentile in 2016, and the 55th percentile in 2017 would have shown a trend of improvement of 5 percentiles of improvement each year. Percentiles allow us to compare relative performance from year to year. This method is used for both the elementary and middle school categories of SOD awards.

High School Band

- In the past, CEE used the 10th grade HSPE Reading and the EOC-Math-1 and 2 assessments results for percent meeting standard to calculate the awards. The move to SBA presents several issues for SOD in high schools.
  - 10^{th} graders are no longer assessed for accountability purposes (and thus, OSPI does not publish their results). With SBA, the 11^{th} graders are assessed in ELA and math. However, the 5 years of historical data used for SOD are based on 10^{th} grade results. OSPI is no longer publically reporting the 10^{th} grade assessment results, which is a requirement to be used in the SOD award calculations.
  - Misleading 11^{th} grade data: Across the state, nearly 50% of the 11^{th} grade students refused to participate in the 11^{th} grade assessments in 2015 which continued into 2016 and 2017 data; therefore, these data do not represent a valid view of performance of each school this year.
- CEE consulted with ESD, district, and school leadership from around the state on possible solutions for the high school SOD calculations. The widespread consensus was that the only meaningful and authentic measure of high school performance that was available for every high school in the state is the graduation rate data. CEE has implemented the SOD awards for 2018 by measuring improvement over 5 graduating classes in 5-year Adjusted Cohort Graduation Rates (ACGR).

General Methodology Notes

- A school may be considered in multiple bands, e.g. a K-8 school would be eligible in both elementary and middle/junior high bands. Alternative learning environments are considered independently in each of the three grade bands.
- A school must have data in at least three of five years to be considered—one of which must be 2018.
- "Improvement" is defined as the slope of linear trend over the five years.
- The number of schools comprising 5% is based on the number of schools at each grade band with valid 2018 data.

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Data-set Definition

The data-set used to construct the Schools of Distinction analysis starts with publically available data on the MSP and SBA assessment results as published by the Washington State Office of the Superintendent of Public Instruction (OSPI). This publically available data source ensures transparency and ease of access to the underlying data.

Note: Because we use the publically available data, only schools with at least 10 students per grade per content area will have assessment results.

The explicit source for this data is from the data downloads section of the state report card found at http://reportcard.ospi.k12.wa.us/DataDownload.aspx.

Analysis Methodology

1. Combine the year-by-year assessments results, using the School ID number as the key. The latest demographic information and the schools' latest OSPI accountability designation (Priority, Focus, Award) are also included.
    a. For grades 3, 4, 5, 6, 7, and 8, the years combined include MSP results for 2014 and Smarter Balanced Assessments for 2015, 2016, 2017, and 2018 in reading/ELA and mathematics.
    b. For High Schools, the years include 2012, 2013, 2014, 2015, and 2016 Adjusted Cohort Graduation Rates (ACGRs) for 5-year cohorts. The "class of 2016" reported 5th year graduation after June of 2017, which was published by OSPI in early 2018—this is the *most current* graduation rate data available.
2. For each year, for each grade, and for each content area, calculate the percentile rank for each value. The rankings for reading/ELA and mathematics are combined for a single value for that year.
3. Within each grade band (Elementary Schools are grades 3, 4, and 5; Middle Schools are grades 6, 7, and 8), determine if a school has enough data to be a candidate for that year in that band. To be a candidate, a school must have data in 2 of the 3 grades within the band. For example, in a K-4 school with enough students in both grades 3 and 4, they would be a candidate for the year in the elementary band because they have data in at least 2 of the 3 grades (3 and 4 in this case).
4. Determine consideration set for each grade band. To be in the consideration set for a grade band, a school must be a candidate in at least 3 of the years, *including 2018*. This rule of "at least 3 years" is to establish a trend of improvement. It also enables us to still consider the large number of schools which participated in the 2014 SBA Field Test since these schools have no data for assessment results in 2014.
    a. For the elementary band, the consideration set of schools meeting the data requirements is 1,012.
    b. For the middle school band, the consideration set of schools meeting the data requirements is 387.
    c. For the high school band, the consideration set of schools meeting the data requirements is 367.
5. Calculate the yearly improvement trend over the 5 years in each of the grade bands. The trend of improvement is defined as the slope of the linear trend over the set of years.
6. Stack rank each band and select the top 5% of each band as the *School of Distinction* Award winners.

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Descriptive Details

Grade Band	Total Consideration Set	5% for Awards
Elementary Schools	1012	51
Middle Schools	387	20
High Schools	367	20

For 2018, 57 Districts have winning Schools.

Educational Service District	Number of Schools
Northeast ESD (ESD 101)	10
South Central WA (Yakima ESD 105)	8
Southwest WA (Vancouver ESD 112)	5
Olympia Area (ESD 113)	12
Olympic Peninsula (ESD 114)	6
Puget Sound (ESD 121)	26
Southeast WA (Tri-Cities ESD 123)	7
North Central ESD (ESD 171)	5
Northwest WA ESD (ESD 189)	12

	Enrollment	% Poverty	% English Learners	% Students with Disabilities
Min	25	4	0	0
Max	2244	95	52	27
Average	438	49	9	13

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APPENDIX A: Conceptual Model of using Normalized Scores to Measure Improvement

Preface

There is an old adage in social sciences research—***if you want to measure change, don't change the measure.*** Never has that adage been more relevant to educational leaders than right now as we analyze the use of SBA and look to find valid and authentic ways to measure improvement for the *School of Distinction* Awards.

The arrival of the Smarter Balanced Assessment last year as a new and more rigorous way to measure student attainment of the new Common Core State Standards (CCSS) ushered in many questions about how we would be able to track and analyze student progress. The standards were different. The measures were different. The prediction was that students would score significantly lower on the new assessments. Further, we were lost as to how we could track student progress over time given all of these differences.

CEE sought a way to compare the "apples and oranges" of the previous assessment system and the SBA. Being able to track improvement over time is essential to learning how well students are progressing within each school.

State assessment leadership and the leadership of the SBA consortium indicated that simply comparing percent of students meeting standard on historical MSP, HSPE, and EOC assessments with proficiency on the SBA assessments would not provide meaningful data from which to gauge "how a school is doing" or whether or not the school's teaching and learning system is showing improved outcomes[1]. As we saw with the statewide results, the more rigorous standards measured in the SBA were a higher bar, and the results in all grade levels and in both ELA and Math declined from previous MSP, HSPE, and EOC assessment results.

What do you mean by normalizing?

By taking a normative approach, we are able to measure whether a school has improved or declined in relationship to the normative or "typical" performance of all schools in the state. In common usage, "typical" refers to median performance. The median performance is the center of the bell curve and represents the middle level of performance (i.e., the point where 50% of the schools perform above and 50% of the schools perform below that point, or 50th percentile).

How can you draw relevant conclusions about achievement based upon normalized scores?

The median is a valid measure, regardless of a specific assessment being analyzed, and this allows the medians to be compared in a meaningful way. The performance of the typical building in reading and math would be at the median of the state on the MSP over the last several years. By showing your building relative to the median for several years, you will be able to determine if you have increased or decreased your relative standing. It doesn't matter that the percent of students meeting standard has fluctuated from year-to-year—just that the median (and standard deviation) for each year is accurately calculated. CEE will use three years of MSP/HSPE/EOC data and two years of SBA data to compare.

It is reasonable to assume that in a *typical* school, with *typical* instructional quality, *typical* curriculum and materials, and *typical* professional development preparing for the CCSS that the school would continue to perform at, or close to, the *typical*, or median, performance level on the SBA. Therefore, if the school's performance on the new SBA assessments was significantly higher than the median, it is reasonable to conclude that, relative to other schools in the state, this school improved their student outcomes. Likewise, a school that has been at the median and then fell could be considered to have declined (not improved) in the move to SBA relative to other schools.

[1] Joe Willhoft, SBA Executive Director, keynote at the Washington Educational Research Association Meeting, December 12, 2014, Seattle, WA.

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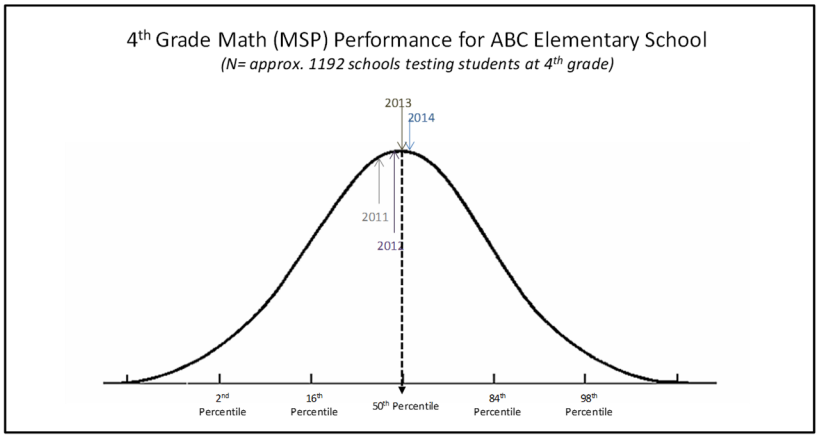
The CEE Model in Detail

Consider the performance of the imaginary ABC Elementary School over the last four years of MSP testing.

In Figure 1, in each of the four years, the school has performed "around median" when compared to all schools in the state (MSP data).

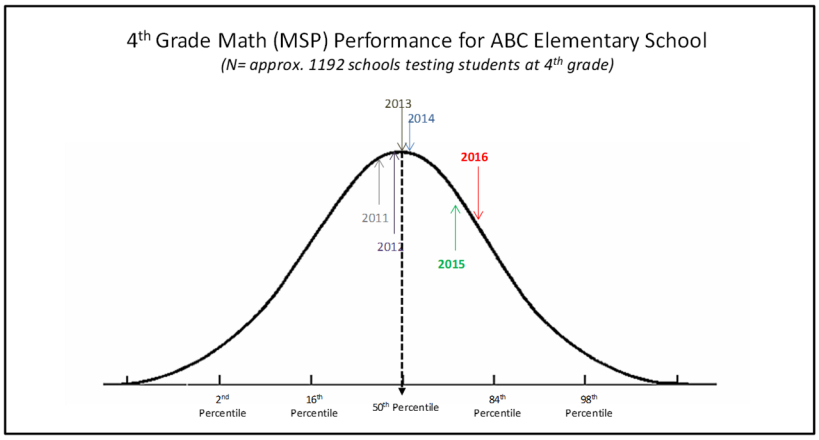
Figure 1: ABC Elementary MSP Performance



If we now fast-forward in time to the summer of 2016 where the school improvement team is trying to determine how they are doing. Consider Figure 2.

In Figure 2, the school's performance in 2015 and 2016, relative to the other schools in the state, has jumped dramatically. We could conclude that the school has improved performance across the move to the SBA and CCSS.

Figure 2: ABC Elementary School Performance with 2015 and 2016 SBA

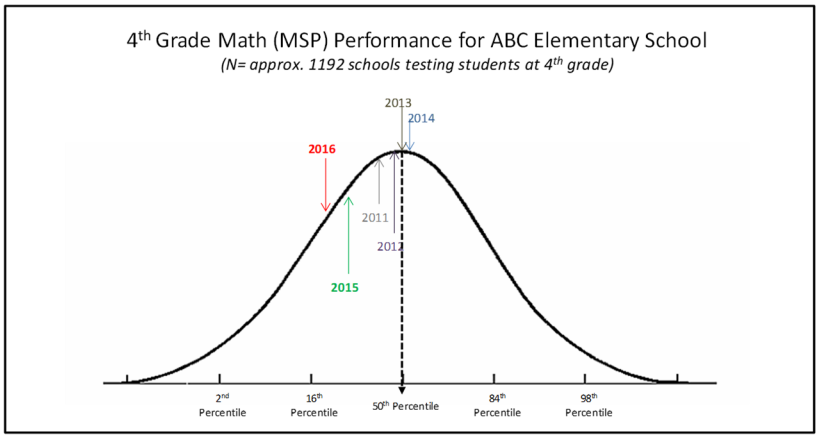


In Figure 3, we see an example of performance that should lead staff and leadership to be concerned. The relative performance of the school over the first two years of SBA assessments is significantly lower (relative to other schools in the state) than where they were in 2011 to 2014.

Because what is compared is based on the medians (not raw scores themselves), this model can be applied to any content area and any grade where historical data exists.

It will provide staff and leadership with another data point from which to gauge the success (or challenges) of their move toward the CCSS and the SBA.

Figure 3: An Example of "Challenge"



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Measuring Change When Changing the Measure

The move to CCSS and the introduction of the SBA represents one of the most widespread and far reaching changes in education in the last three decades. These rigorous standards significantly impact not only what we teach, but how we teach to increasingly difficult standards at each grade level. The standards require deeper understanding of content, application of knowledge, analytic thinking, and problem solving at very high levels.

Educational leaders are challenged in this environment to help staff members, leadership and improvement teams, and parents and community to understand and interpret the results of assessments, to answer the questions about how well our students and schools are performing. Those questions can be addressed using the normative model, as one means of interpreting student achievement. This CEE model, as an analytical approach, should not stand alone but would be one significant element of the tool kit of assessment analytics in each district and school in the state. Using the normative methodology and multiple data measures, schools and districts can assess student attainment and improvement, as well as set specific goals to increase student achievement over the next several years.

CEE offers research-based solutions for collecting, understanding, and interpreting data to assist educators in doing our best work for the students we serve. Better data leads to better decisions which lead to better schools. This model for SBA analysis is one of those opportunities. If you have questions or wish to discuss this further, please do not hesitate to contact us at info@effectiveness.org.

Better Data. Better Decisions. Better Schools.

The Center for Educational Effectiveness