CENTER FOR EDUCATIONAL EFFECTIVENESS, INC.

Phi Delta Kappa-Washington State and the Center for Educational Effectiveness "Great Schools Award"

Methodology & Background Information

Background
In July 2007, The Center for Educational Effectiveness (CEE) was contracted to provide independent, third party expertise in a collaborative project with OSPI leadership on the design and analysis of a process to recognize schools demonstrating exceptional improvement in Reading and Math performance. For October 2007 and October 2008 award, this recognition was known as the "State Superintendent's *Schools of Distinction– Learning Improvement Awards*". CEE also provided assistance in the validation of data used in this award. CEE's expertise has evolved over 9 years, through partnerships with over 550 schools and over 110 districts in Washington on the formative use of data to drive school and district improvement.

For September 2009, sponsorship for this school-level, learning improvement award, now known as the "*Great Schools Award*" is through the Washington Chapter of Phi Delta Kappa International (PDK-WA) and the Center for Educational Effectiveness.

Design Objectives
The design objectives for this recognition remain the same in 2009 as used in 2007 and 2008 and are centered on several factors that were integral for measuring improvement:
- Recognizing that schools have a variety of challenges, opportunities and radically different starting points in terms of student performance-- the intention was to recognize growth across the spectrum of performance– not simply getting students to "meeting standard".
- Recognize improvement over at least a 5 year period of time.
- Develop a methodology that combines the two foundational skills— literacy and numeracy (Reading and Math) in order to identify and recognize growth in both areas
- Create a model which adds value for stakeholders— as additional information, not a replacement for AYP determination.
- Use publicly available data to ensure transparency and openness
- Meaningful: recognize a small number of schools who have demonstrated exceptional improvement in a Reading and Math Learning Index. All award winners must have at least "adequate performance" in both Reading and Math.

Defining a way to view *Improvement*
NCLB and the AYP calculations use year-to-year results for the "percentage of students meeting standard" and "safe harbor". Since 2004, CEE has used an alternative model based on the Reading and Math Level Indices (RLI and MLI). The RLI and MLI definition dates back to Washington's Commission on Student Learning and the A+ Commission. Used to determine growth targets before NCLB, the strength of these indices is that they represent the performance of "all students" in the building, not simply those "meeting standard".

Recall that the WASL sub-test results are reported in 4 levels of performance: Below Basic (Level-1), Basic (Level-2), Proficient (Level-3 = "met standard"), and Advanced (Level-4).

Consider two buildings' Reading results:
- Building A: 50% of students at Level-1 (Below Basic) and 50% Level-3 (Proficient)
- Building B: 50% of students at Level-2 (Basic) and 50% Level-4 (Advanced)

Both of these buildings would show 50% meeting standard, yet clearly Building B has higher performing students (with no students at Level-1).

The Reading Learning Index and Math Learning Index are calculated as:

RLI or MLI := (1 * % at Level-1) + (2 * % at Level-2) + (3 * % at Level-3) + (4 * % at Level-4)

While the two buildings listed above have identical "% Meeting Standard" at 50%, their Reading Learning Indices would be:
- School A: **2.0** = (1 * .50) + (3 * .50)
- School B: **3.0** = (2 * .50) + (4 * .50)

If you only looked at "% meeting standard" you would say that these two schools have *identical performance* – but as we see above, this is not the case.   The Reading Learning Index shows a more accurate picture of performance in these two schools' performance—with School B's students demonstrating higher performance than School A.

CEE has recognized the need for a view of performance that utilizes the Learning Indices, and since 2004 has combined the Reading and Math Indices into a single Reading / Math Learning Index (RMLI).   RMLI is defined as the average of the two indices (RMLI= (RLI+MLI) /2).   This combined index helps us achieve several of the design objectives: 1.) an accurate and valid way to look at the spectrum of student performance, 2.) across both Reading and Math, 3.) in a way that is based on easily accessible data.

Change between the baseline and 2008 is then used as the definition of "improvement". Using the RMLI, a 0.10 change represents that 10% of the students moved up one performance level in both Reading and Math. Likewise, a 0.75 improvement could be accurately interpreted as 75% of the students have improved by one level.

Data-set Definition
The raw data sources used in this analysis are all available from the "Data Files" section of the OSPI Web site's Report Card (see: http://reportcard.ospi.k12.wa.us/DataDownload.aspx). NCLB legislation and the State of Washington's NCLB Accountability Plan took effect in 2001, thus the decision to use 2001 & 2002 as the baseline years for the 2007 awards. For 2008, we used the same span; implying that 2002 & 2003 was the baseline. For 2009, we, again, moved the span ahead one year, implying that 2003 and 2004 are the baseline years.

Prior to 2006, Reading and Math were only assessed at grades 4, 7, and 10. Since the baseline is prior to 2006, we are using WASL data for grades 4, 7, and 10.

Analysis Methodology
Step 1: Build the data set for all schools in the state for the 2003 – 2009 WASL years for grades 4, 7, and 10
- Schools which span more than one of the 3 levels are considered independently in all appropriate levels (e.g. a K-8 school would have data for grades 4 and 7).

Step 2: Calculate baseline used in the comparison with 2009 results
- In order to mediate for the volatility in year-to-year results in extremely small environments, the baseline was defined as the average of 2003 and 2004 RMLI.

- Schools which had incomplete data for this 7 year period are still considered. E.g., For a new building which opened in 2005, the baseline would be the 2005 results.
- Schools which had missing data are still considered if they had at least one year of data in the 2003-2007 years and data in the 2009 WASL year.

Step 3: Calculate change in RMLI between baseline and 2009

Step 4: Remove schools that did not have at least "adequate" performance in 2007 for *both* Reading and Math.
- "Adequate" was defined to be at least the performance-level of the state average at each respective grade level based on 2008 WASL results for grades 4, 7, and 10 (margin of error is added to scores for determining if the "adequate" performance threshold is met).
- A school that had huge gains in Reading while sacrificing Math could not be recognized. Both are foundational skills and we wanted to see improvement in both.

Step 5: Identify "Exceptional" Improvement
- The top 5% of schools at each level represent significant improvement in RMLI over the 2003 – 2009 time periods. Specifically, the range of change in RMLI for the award winners[1]:

	2009 Range for Award Winners—change in Learning Index	2008 Range for Award Winners—change in Learning Index	2007 Range for Award Winners—change in Learning Index
Elementary (Grade 4)	.353 – 1.088	.400 – 1.010	.540 – 2.048
Middle School (Grade 7)	.458 – 1.248	.650 – 1.238	.910 – 1.243
High School (Grade 10)	.383 - .903	.568 – 1.035	.663 – 1.040

Step 6: Reproduce and validate the results with final 2009 WASL Data. As independent steps, CEE reproduced the results to ensure consistency and reproducibility.

The schools identified in this analysis represent exceptional improvement in combined Reading and Math as demonstrated by the students they have served over the 2003 – 2009 timeframe.

For More Information

Center for Educational Effectiveness (CEE) provides data-centric tools, services, consulting, and research and is dedicated to the mission of partnering with K-12 schools & districts to increase student learning by improving the effectiveness of educational institutions. CEE is actively involved in assisting schools and districts in the western United States with research and tools to enhance school improvement efforts. CEE's tools and services are currently being used by over 450 schools and districts in the western U.S. For more information about CEE data-centered solutions for your school or district, see www.effectiveness.org or 425-283-0384.

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[1] Reading and Math "Percent Meeting Standard" were used within the ranges to sort equal RMLI Improvement results (i.e. tie-breaker).