



OSPI

Office of Superintendent of Public Instruction
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Methodology Background- Persistently Low Achieving Schools Identification

References:

- “SIG-G” Guidance on School Improvement Grants under section 1003(g) of the ESEA of 1965. Document “sigguidance02232011.pdf” updated February 23, 2011, found at <http://www2.ed.gov/programs/sif/sigguidance02232011.pdf>

Definition of Persistently Lowest-Achieving Schools

Final requirements under section 1003(g) of the Elementary and Secondary Education Act (ESEA) specify that School Improvement Grants (SIGs) will be available to a state’s lowest 5% of persistently lowest-achieving Title I schools identified for improvement, corrective action, or restructuring. On January 21, 2010, the U.S. Department of Education (ED) released interim requirements that allowed states to expand the list of schools that may be added to Tiers I, II or Tier III. These schools are referred to as “Newly Eligible.” The definition below reflects the criteria and methodology used to define schools in the respective tiers.

Washington State’s definition of “*Persistently Lowest-Achieving Schools*” means:

Tier I

- (a) Any Title I school in improvement, corrective action or restructuring that:
 - (i) Is among the lowest-achieving five percent in the “all students” group in reading and mathematics combined for the past three consecutive years; or
 - (ii) Is a high school that has a weighted-average graduation rate that is less than 60% based on the past three years of data.

Tier II

- (a) Any secondary school that is eligible for, but does not receive, Title I funds that:
 - (i) Is among the lowest-achieving five percent of secondary schools in the “all students” group in reading and mathematics combined for the past three consecutive years; or
 - (ii) Is a high school that has a weighted-average graduation rate that is less than 60% based on the past three years of data.

Tier III includes all other Title I schools in improvement, corrective action, or restructuring that are not among the persistently lowest-achieving schools in Tier I. In February 2010, OSPI submitted a waiver to ED to exclude schools from the pool of “persistently lowest-achieving schools” for Tier I and Tier II, any school in which the total number of students in the “all students” group in the grades assessed who were enrolled in the school for a full academic year is less than 30. As required in the waiver, the Office of Superintendent of Public Instruction (OSPI) has added these removed schools to Tier III.

Definition of Terms:

Lack of Progress: For purposes of defining “*persistently lowest-achieving schools*” OSPI has defined “*lack of progress*” as the school’s percent increase or decrease (slope of linear regression) over the most recent three-year period compared to the state slope.

Title I eligibility: Based on SY2009-10 student data, a school is considered Title I eligible if:

- Poverty percentage is 35 percent or more, or
- The school’s poverty percentage is greater than or equal to the district’s poverty average.

Appropriate Accuracy for Tiered Determinations: OSPI has requested permission to exclude, from the pool of schools from which it identifies the persistently lowest-achieving schools for Tier I and Tier II, any school in which the total number of students in the “all students” group in the grades assessed who were enrolled in the school for a full academic year as that term is defined in Washington’s Accountability Workbook is less than 30. The rigor attached to Adequate Yearly Progress (AYP) calculations includes utilization of both a standard error of proportion (SEP) and a minimum N requirement consistent with research-based practices required by the Department of Education. For determining persistently low achieving schools, a minimum N of 30 provides this validity. With a sample of 30, the standard error of proportion at 50% proficiency is 15.02% at 95-percent confidence. The standard error of proportion is a parametric statistic that is based on a binomial distribution of probabilities. It becomes more inaccurate as sample size N decreases. Therefore, a minimum “N” assures the appropriate accuracy needed for valid and reliable determinations.

WCAP: Washington Comprehensive Assessment Program. Descriptor used to describe student-level assessments. This is the overarching umbrella term for the following assessments: Measures of Student Progress (MSP) for Reading and Mathematics in grades 3 through 8, High School Proficiency Exam (HSPE) for Reading grade 10, and End of Course Exam (EOC) for grade 10 Mathematics. These are the identical assessments used to calculate AYP.

SIG-G Definitions for Washington (SIG-G Step 1):

- “Secondary School”: any school serving students in grades 7-12 (see WAC 392-348-235- references 6-year secondary school serving grades 7-12.
- “Number of Years”: 2009, 2010, and 2011: We selected the most-recent three years of data for both student achievement and graduation rates in determining “persistently low achieving”.
- Steps 1 – 5 of Improvement: identical to “schools in improvement, corrective action, or restructuring”
- Data Sources:
 - Demographic Data: From OSPI “Data Files” section of the WA State OSPI Report Card
<http://reportcard.ospi.k12.wa.us/DataDownload.aspx>
 - AYP, No Child Left Behind (NCLB) Improvement Status Data: From OSPI “Data Files” section of the WA State OSPI Report Card
<http://reportcard.ospi.k12.wa.us/DataDownload.aspx>
 - SY2010-11 Title I Eligibility and Title I Status: OSPI Title I Office
 - Student Assessment Data: OSPI Student Information Group
 - Student graduation rate Data: OSPI Student Information Group

SIG-G Step 2: Determine the number of schools that make up 5% of schools in each tier

Table 1:

Tiers I & II: of the 2,112 schools in WA that have student achievement results or Graduation rates

Step 1: There are 2,112 schools in Washington State for which Adequate Yearly Progress is calculated	
Tier I	Tier II
Step 2: Of the 2,112 schools, there are a total of 908 Title I schools (removed 1204 schools who are not Title I).	Step 2: Of the 2,112 schools, 1052 serve one or more students in grades 7 through 10 (removed 1060 schools who serve no students in grade 7 through High School)
Step 3: Of the 908 Title I schools, 547 schools are in improvement, corrective action, or restructuring (removed 361 schools who are not in improvement, corrective action, or restructuring)	Step 3: Of the 1052 schools, 662 are Title I eligible (removed 390 schools not eligible for Title I)
Step 4: Given this data set, 5% of 547 is 27 schools ($547 \times .05 = 27.35$)	Step 4: Of the 662, 429 of these schools do not receive Title I funds (removed 233 who receive Title I)
	Step 5: Given this data set, 5% of 429 is 21 schools ($429 \times .05 = 21.45$)
<i>Note: of the 547, 13 schools did not have at least 30 students tested in Reading and Math in one or more years. These schools are excluded from stack ranking (534 schools are stack ranked).</i>	<i>Note: of the 429, 108 schools did not have at least 30 students tested in Reading and Math in one or more years. These schools are excluded from stack ranking (321 schools are stack ranked).</i>
Graduation Rates: High Schools added to either Tier I or Tier II due to a weighted average graduation rate of less than 60% over the past three years. Note: Extended graduation rates were not included in this data set.	
Step 1: Of the 534 Title I schools in improvement, corrective action or restructuring, 25 are high schools.	Step 1: Of the 429 schools that are Title I eligible, but not receiving funds, 133 are high schools.
Step 2: Of the 25 high schools, 4 have a graduation rate of less than 60% (and is not identified in lowest 5%). Therefore, 4 high schools were added to Tier I exclusively for graduation rates less than 60%.	Step 2: Of the 133 high schools, 5 have a graduation rate of less than 60% (and is not identified in lowest 5%). Therefore, 5 high schools were added to Tier II exclusively for graduation rates less than 60%.
Total Tier I Schools: 31 Schools	Total Tier II Schools: 26 Schools

SIG-G Steps 3-9:

- “Continuously enrolled students”. SIG-G A-3 (pg. 2) specifies that we must follow requirements for proficiency as specified in section 1111(b)(3) of ESEA. This includes the requirement to only use “Continuously Enrolled” students (students as of Oct 1 of that year). The data provided by OSPI Office of Student Information follows this requirement.
- As with AYP calculations and as guided by 1111(b)(3) of ESEA (as specified in the Washington Federal Accountability Workbook, approved August 18, 2009), we are using a minimum N of 30 students for considering WCAP achievement or graduation rates¹. The summation of the number-of-students-tested is cumulative by content-area.

E.g.: A K-5 Elementary school will have WCAP data for grades 3, 4, and 5. If School-A tests 8, 9, and 7 students in grades 3, 4, and 5 reading respectively, they would have a total tested of 24 students. If School-B tests 12, 18, and 13 students in grades 3, 4, and 5 reading they have a total of 43 students.

- “Persistently”: in order to have a valid way to look at “persistently” low achieving schools, the school had to have 3 years of data in both Reading and Mathematics (2009, 2010, and 2011 data). Similarly for graduation rates, a school had to have 3 years of data.
- Progress and Lack of Progress: (see also: SIG-G page 7, question A-16 “Example 1”- Lack of Specific Progress). Using statewide results for the last 3 years, calculate the state’s progress defined as the slope of the linear regression of reading and math combined proficiency. This will need to be calculated each year with the most recent three years of data. For the (2009, 2010, and 2011, the state’s progress is equal to -0.003115 (-0.3
- Stack ranking within years and content areas: Each building in the consideration set was rank ordered from highest to lowest achieving in each content area by year within the consideration set for each tier. I.e. there are 6 ranks- 3 for Reading (2007, 2008, and 2009) and 3 for Mathematics (2009, 2010, and 2011).

Based on these 6 data points, we employ the “Adding Ranks Method” (SIG-G page 6, question A-15 “Example 2”). Since the added ranks depend on the number of schools in each tier, the value associated with the sum of these six ranks will be 6 to (Number in Tier x 6). E.g. If the Tier has 75 schools, the possible values of the sum of the ranks will be 6 to 450. For each of the 6 rankings, we also identify the bottom 5% within each.

¹ Specifically-- 1111(b)(3)(xiii) of ESEA requires states to: “enable results to be disaggregated within each State, local educational agency, and school except that, in the case of a local educational agency or a school, such disaggregation shall not be required in a case in which the number of students in a category is insufficient to yield statistically reliable information or the results would reveal personally identifiable information about an individual student;”

- **FINAL Rank Ordering:**
Final ranking is performed with a three-level (hierarchical) sort utilizing the following variables as the sort criteria:

Criteria	Sort Order
Schools in bottom 5% in at least once in both reading and mathematics	A...Z (“Yes” prioritizes a school as “persistently low achieving”)
Total added ranks	Smallest to Largest (large number prioritizes a school as “persistently low achieving”)
Progress relative to the state	Largest to Smallest (smallest prioritizes a school based on lack of progress)

- Starting from the bottom of the list we count up the number of schools outlined in Step-2 above.
- **Graduation Rate:** As defined in SIG-G page 1—after the bottom 5% are selected, then any secondary schools with three year weighted graduation rate less than 60% is added to the list. Weighting for the weighted average is based on number of students in the on-time graduation cohort.

Table 3 Tier 3 Schools

Tier 3
Of the 2,012 schools in WA, Tier 1 consideration set is 547 buildings. 31 buildings are identified as Tier 1 due to achievement or graduation rate. The remaining 516 buildings are in Tier 3.
Final total of Tier 3 Schools: 516 Schools

Table 4: Example

For Tier 1, if the consideration set is 450 schools, the rankings for each year/content area are from 1...450. The bottom 5% (highlighted in RED is 23 schools). This example uses the 3 years 2007, 2008, and 2009 and is for illustration purposes only. The actual analysis used the three most recent years (2009, 2010, and 2011).

School	2007 Reading	2008 Reading	2009 Reading	2007 Math	2008 Math	2009 Math	Added Ranks	Progress
1	403	386	418	436	437	428	2508	No: -1.0
2	405	413	403	417	433	437	2508	No: -2.8
3	416	445	441	420	421	425	2568	No: -0.5
4	444	448	419	449	449	449	2658	No: -4.5

Applying the FINAL Rank Ordering described above:

- Schools in bottom 5% in at least once in both reading and mathematics
 - School 4 is bottom 5% in BOTH reading and math and ranks to the bottom of the list
- Total added ranks: After applying the “bottom 5% in both” criteria, then we go to added ranks. Larger numbers go to the bottom of the list—so School 3 ranks below schools 1 & 2
- Progress relative to the state: Since schools 1 and 2 tie on added ranks (both at 2508) then Progress is the 3rd criteria applied.
 - Both Schools 1 and 2 are NOT making progress relative to the state, but the trend of improvement in school 2 is a -2.8 (i.e. school’s combined reading and math proficiency rate is declining by 2.8 points per year) and therefore, school 2 ranks below school 1.

Definitions of Tier I and Tier II: Verbatim from SIG-G page 1:

“Persistently Lowest-Achieving Schools” (Tier I and Tier II Schools)”

A-1. What is the definition of “persistently lowest-achieving schools”?

“Persistently lowest-achieving schools” means, as determined by the State:

(a) Any Title I school in improvement, corrective action, or restructuring that —

- (i) Is among the lowest-achieving five percent of Title I schools in improvement, corrective action, or restructuring or the lowest-achieving five Title I schools in improvement, corrective action, or restructuring in the State, whichever number of schools is greater; or
- (ii) Is a high school that has had a graduation rate as defined in 34 C.F.R. § 200.19(b) that is less than 60 percent over a number of years;

and

(b) Any secondary school that is eligible for, but does not receive, Title I funds that —

- (i) Is among the lowest-achieving five percent of secondary schools or the lowest-achieving five secondary schools in the State that are eligible for, but do not receive, Title I funds, whichever number of schools is greater; or
- (ii) Is a high school that has had a graduation rate as defined in 34 C.F.R. § 200.19(b) that is less than 60 percent over a number of years.

A school that falls within the definition of (a) above is a “Tier I” school and a school that falls within the definition of (b) above is a “Tier II” school for purposes of using SIG funds under section 1003(g) of the ESEA.

Achievement: most recent three years for continuously enrolled students

Data Source: OSPI Student Information

For each year calculate the percent proficient in Reading and Mathematics.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	
School Code	RMet09 Gr03	RTot09 Gr03	MMet09 Gr03	MTot09 Gr03	RMet09 Gr04	RTot09 Gr04	MMet09 Gr04	MTot09 Gr04	RMet09 Gr05	RTot09 Gr05	MMet09 Gr05	MTot09 Gr05	RMet09 Gr06	RTot09 Gr06	MMet09 Gr06	MTot09 Gr06	RMet09 Gr07	RTot09 Gr07	MMet09 Gr07	MTot09 Gr07	RMet09 Gr08	RTot09 Gr08	MMet09 Gr08	MTot09 Gr08	RMet09 Gr10	RTot09 Gr10	MMet09 Gr10	MTot09 Gr10	
1	21	68	10	68	42	102	8	102	38	87	24	87																	
2									28	28	27	28	27	28	26	28	26	26	26	26	25	29	27	29	1	1	0	1	
3													165	241	103	241	139	234	123	233									
4													5	9	4	9	4	8	4	8	4	5	4	5					

$ReadingProficiency = \frac{NumberOfStudentsMeetingReadingStandard}{TotalNumberOfStudentsTestedInReading}$ NOTE: This is calculated ONLY when the Number of students is > 29.

Using the above data: $NumberOfStudentsMeetingReadingStandard = B + F + J + N + R + V + Z$

$TotalNumberOfStudentsTestedInReading = C + G + K + O + S + U + AA$

Notes:

- Proficiency percentages are calculated only when the Number of students (per subject area) is > 29.
- In this example—4th line: the total tested in Reading is 22 and the total tested in Math is 22—therefore neither proficiency rate is calculated.
- This example represents the results of one year. This is repeated for each of the three most-recent years.

AD	AE	AF	AG	AH	AI	AJ
RMet09	RTot09	MMet09	MTot09	RMetPcnt09	MMetPcnt09	R-M-MetPcnt09
101	257	42	257	39.3%	16.3%	27.8%
107	112	106	112	95.5%	94.6%	95.1%
304	475	226	474	64.0%	47.7%	55.8%
13	22	12	22			

Weighted Average Graduation Rate- Most recent three years:

Data Source: OSPI Student Information for year by year on-time graduation rates and the number of students in the on-time graduation cohort

This is a simple weighted average where the weighting is based on the number of students. This example uses 2007, 2008, and 2009 and is for illustration purposes only:

$$\textit{ThreeYearGradRate} = \frac{((\textit{Num09} \times \textit{GradRate09}) + (\textit{Num08} \times \textit{GradRate08}) + (\textit{Num07} \times \textit{GradRate07}))}{(\textit{Num09} + \textit{Num08} + \textit{Num07})}$$

Where

- *Num09*, *Num08*, and *Num07* are the number of students in the on-time graduation cohort for the years 2009, 2008, and 2007 respectively
- *GradRate09*, *GradRate08*, and *GradRate07* are the percentage of students graduating on-time for the years 2009, 2008, and 2007 respectively