School Ranking Business Rules

Short Narrative Version

Persistently Lowest Achieving Schools for MCL 380.1280c, SFSFII and SIG Applications

To identify the persistently lowest performing schools the Michigan Department of Education (MDE) first identified the pool of eligible schools. All Title I schools in improvement, corrective action, or restructuring were identified and listed. All non-Title I secondary schools that were eligible to receive Title I funds were listed. Secondary schools in Michigan are those schools with any grades 7-12. Closed schools were removed from both lists. Schools were then rank ordered using the business rules below to find the lowest 5% of each and identify schools eligible for SIG funds as Tier 1, Tier 2 and Tier 3 schools. Tier 1 and 2 schools are placed under the supervision of the State Reform/Redesign Officer in accordance with MCL 280.1280c.

The following business rules were used to create the list of lowest performing 5% of Title I schools identified for improvement, corrective action and restructuring. These schools are eligible for SIG funds as Tier 1 schools:

- Schools were included if they receive Title I funds AND are identified for improvement, corrective action, or restructuring.

- Shared educational entities (SEE) with test scores to be sent back to the resident district were not included.

- The rules for school rankings described below were applied.

- The lowest 5% of the ranked schools are identified as Tier 1 schools.

- Any high schools in the Tier 1 pool that have a four-year graduation rate of 60% or less for the last three years are also identified as Tier 1 schools.

The following business rules were used to create the list of lowest performing 5% of secondary schools that are eligible to receive Title I funds but are not receiving Title I funds. These schools are eligible for SIG funds as Tier 2 schools.

- Schools were included if they were secondary schools (those housing any of grades 7-12) AND were eligible to receive Title I funds but did not receive Title I funds.

- Shared educational entities (SEE) with test scores to be sent back to the resident district were not included.

- The rules for school rankings described below were applied.

- The lowest 5% of the ranked schools are identified as preliminary Tier 2 schools.

- Secondary schools from the Tier 1 pool (Title I secondary schools that have not made AYP for two or more consecutive years) that did not fall into the lowest 5% but that have academic performance equal to or lower than the highest ranked preliminary Tier 2 school are added into the Tier 2 schools list.*
- Any high schools in the Tier 2 pool that have a four-year graduation rate of 60% or less for the last three years are also identified as Tier 2 schools.

The following business rules were used to create the list of Tier 3 schools. These schools are eligible for SIG funds as Tier 3 schools.

- All schools from the Tier 1 pool of schools that were not identified as Tier 1 lowest 5% or as Tier 1 based on graduation rate are included as Tier 3 schools unless the schools were newly eligible and identified as Tier 2 schools.
- Any school that was omitted due to small size (fewer than 30 FAY students tested), but shows up on Tier 1 or Tier 2 on a rerun of the list without the 30 FAY students tested restriction.

The following business rules were used to calculate the school rankings for the Tier 1 and Tier 2 lists.

- Proficiency calculations for the "all students group" are based on regular and alternate assessments: MEAP, MEAP-Access (if available), MME, MME-Access, and MI-Access.
- All students with valid math and reading scores in the assessments were included.
- A student with a performance level of 1 or 2 is considered proficient.
- All students with test scores who are full academic year (FAY) were included.
- Only public school students were included (no home schooled or private school students).
- The school receives a ranking if at least 30 FAY students are tested in either the elementary/middle school span or the high school span (or both) for each year.
- Schools were rank ordered using a proficiency index (based on the weighted average of two years of achievement data) and a progress index (based on three years of achievement data) to combine test scores from different grades, progress over two or three years, and test scores for both reading and mathematics.
- Achievement is weighted twice as much as improvement. This is because the focus is on persistently low-achieving schools. Weighting proficiency more heavily assures that the lowest performing schools, unless they are improving significantly over time, still receive the assistance and monitoring they need to begin improvement and/or increase their

improvement to a degree that will reasonably quickly lead to adequate achievement levels.

* Although Michigan applied for a waiver to include Title I secondary schools in the Tier 2 pool, Michigan has chosen instead to use the flexibility granted to states through the Consolidated Appropriations Act of 2010 to make newly eligible all Title 1 secondary schools with lower performance than the highest performing Tier 2 school. This allows us to offer School Improvement Grant funds to an additional 64 schools. This additional flexibility is described in Guidance on School Improvement Grants, page 11: an SEA may identify as a Tier II school a secondary school that is eligible for Title I, Part A funds and that:
(A)(1) Has not made AYP for at least two consecutive years; or
   (2) Is in the State's lowest quintile of performance based on proficiency rates on the State's assessments under section 1111(b)(3) of the ESEA in reading/language arts and mathematics combined; and
(B)(1) Is no higher achieving than the highest-achieving school identified by the SEA under paragraph (a)(2)(i) of the definition of "persistently lowest-achieving schools" (step 14 in A-18); or
   (2) 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.

School Ranking Business Rules

Full Narrative Version

Datasets to be included (if available)
- Most recent two years of published data from fall MEAP, grades 03-08
- Most recent two years of published data from fall MEAP-Access, grades 03-08
- Most recent two years of published data from fall MI-Access, grades 03-08
- Most recent three years of published data from spring MME, grade 11
- Most recent three years of published data from spring MME-Access, grade 11
- Most recent three years of published data from spring MI-Access, grade 11

Subjects to be included (if available)
- Reading
    - English Language Arts is used in place of reading where English Language Arts is tested in all grades of a program (e.g., MEAP, MEAP-Access, MI-Access, MME, MME-Access, and MI-Access)
- Mathematics

Inclusion rules
- Include only scores from students who are full academic year (FAY)
- Include fall scores in data for the previous year's school and previous grade using feeder codes
- Include spring scores for the current year's school and grade
- Calculate ranking for a school on a subject only if at least 30 FAY students were tested in the elementary/middle school span (3-8) **or** the high school span (9-12), **or** both, for the most recent two years
- Include only public school students (no home schooled or private school students)
- Include schools only if they have ranks in both reading/ELA and mathematics
- Include schools only if they are not shared educational entities (SEEs) whose scores are returned to the sending districts for accountability purposes

Definitions
- Elementary/middle school = a school housing any of grades K-8
- High school = a school housing any of grades 9-12
- Secondary school = a school housing any of grades 7-12
- Full academic year (FAY) indicates that the student was claimed by the school on the previous two count days

Conventions
- A school classified as both elementary/middle and high school has ranks calculated for both sets of grades
- All calculations are rounded to the nearest 0.0001 (4th decimal place)
- The definitive version is based on mathematical operations as performed by Microsoft SQL.

Steps in Calculations
1. Repeat steps 2-5 separately for reading and mathematics and each grade range (elementary/middle versus high school) for each school with 30 or more FAY students tested the grade and subject in the most recent two years for which data are available

2. Calculate a percent proficiency index for the most recent two years in which data are available:
   a. Obtain the percent proficient ($pp3$ and $pp2$ for the most recent and previous year, respectively)
   b. Obtain the number of students tested ($nt3$ and $nt2$ for the most recent and previous year, respectively)
   c. Calculated a weighted average of percent proficient over the most recent to years as $pp=((pp3*nt3)+(pp2*nt2))/(nt3+nt2)$
   d. Calculate the percent proficient index $ppi = (pp - \text{mean}(pp)) / \text{sd}(pp)$ [a z-score]
3. Calculate a percent change index:
   a. Where adjacent year testing occurs (e.g., reading & math in elementary/middle school):
      i. Obtain the percent of students improving or significantly improving for the two most recent years ($pi3$ and $pi2$ for the most recent and previous year, respectively)
      ii. Obtain the percent of student declining or significantly declining for the two most recent years ($pd3$ and $pd2$ for the most recent and previous year, respectively)
      iii. Calculate a weighted average of percents improving and declining as $pi=((pi3*nt3)+(pi2*nt2))/(nt3+nt2)$ and $pd=((pd3*nt3)+(pd2*nt2))/(nt3+nt2)$
      iv. Calculate the two-year average percent improving minus two-year average percent declining ($pid = pi - pd$)
      v. Calculate the percent change index $pci = (pid - \text{mean}(pid)) / \text{sd}(pid)$ [a z-score]
   b. Where adjacent grade testing does not occur (e.g., high school):
      i. Obtain the percent proficient two years ago ($pp1$) and if available three years ago ($pp0$)
      ii. Obtain the number of FAY students tested two years ago ($nt1$) and if available three years ago ($nt0$)
      iii. Calculate the slope ($b1$) of the simple regression of percents proficient on year (representing the three-year or four-year annual change in percent proficient) if there are at least 20 FAY students tested in each of the years used for calculating slopes. Assign a zero (0) if there are less than 20 FAY students tested in any one of the years used to calculate slopes.
      iv. Calculate the percent change index $pci = (b1 - \text{mean}(b1)) / \text{sd}(b1)$ [a z-score]
4. Calculate the percent proficient plus change index ($ppci = [2*ppi + pci]/3$)
5. Calculate the school percentile rank on $ppci$ (pr)
6. Calculate the average school percentile rank across reading and mathematics and grade spans (elementary/middle versus high school) in which the school received a percentile rank ($pr.av.mr$ is calculated as the average of from 2 to 4 percentile ranks)
7. Calculate the school overall percentile rank across reading and mathematics ($pr.mr$) as the school percentile rank on $pr.av.mr$

NOTE: mean(x) denotes the mean (or average) of x
NOTE: sd(x) denotes the standard deviation of x
NOTE: Calculating separately for each grade span addresses the issues of differences in pass rates across subjects and across elementary/middle schools versus high schools. This assures that the list does not consist

solely of high schools because of relatively more rigorous performance expectations in high school as compared to elementary/middle schools. Calculating separately for each grade span also assures that schools that teach students in both grade ranges (3-8 and high school) have measures that are comparable to all other schools.

NOTE: Using *z*-scores weights the proficiency and improvement portions of the calculations in the desired proportions, weights all subjects evenly, and weights elementary school and high school performance evenly.

Additional steps/criteria for Tier 1 lowest 5% and state watch** lists

1. Obtain for each school the following:
    a. Whether the school receives Title I funds. Title I eligibility is derived from N129 CCD Schools (I.D. #22 - Title I School Status) file submission of previous school year.
    b. Whether the school is under corrective action, restructuring, or improvement (CARI) under ESEA because of not making AYP for the most recent two years for which data are available
2. Limit the pool of schools upon which calculations are based to those that:
    a. Receive Title I funds AND are under CARI
3. Identify schools in the lowest 5% of the eligible pool ($pr.mr \leq 5$) and schools in the eligible pool that are high schools with a graduation rate of 60% or lower for the last three consecutive year as on the Tier 1 lowest 5% list
4. Identify schools in the next lowest 15% of the eligible pool ($pr.mr > 5$ and $pr.mr \leq 20$) as on the state's Tier 1 watch list, if they do not show up on the Tier 2 list (described below)

Additional steps/criteria for Tier 2 lowest 5% and state watch** lists

1. Obtain for each school the following:
    a. Whether the school is a secondary school
    b. Whether the school has a graduation rate less than 60 for the most recent three years for which data are available (low grad rate)
    c. Whether the school is eligible for, but does not receive, Title I funds (Title I eligible)
2. Limit the pool of schools upon which calculations are based to those that:
    a. Are secondary schools AND are Title I eligible AND are not on the Tier 1 lowest 5% list
    b. OR are secondary schools AND have a low graduation rate AND are not on the Tier 1 lowest 5% list
3. Identify schools in the lowest 5% of the eligible pool ($pr.mr \leq 5$) or schools with a graduation rate of less than 60 for the most recent three years for which data are available as on the preliminary Tier 2 lowest 5% list
4. Identify schools in the next lowest 15% of the eligible pool ($pr.mr > 5$ and $pr.mr \leq 20$) as on the preliminary Tier 2 watch list
5. Obtain the percentile rank of the highest ranked school on the Tier 2 lowest 5% list
6. Obtain the percentile rank of the highest ranked school on the state's Tier 2 watch list
7. Place on the final Tier 2 lowest 5% list:
    a. all schools on the preliminary Tier 2 lowest 5% list
    b. PLUS any schools from the Tier 1 pool that:
        i. are secondary schools

ii. AND did not make it onto the Tier 1 lowest 5% list
iii. AND have overall performance (on *pr.mr* calculated for all schools statewide) that is lower than or equal to the highest ranked school (on *pr.mr* as calculated only for the Tier 2 eligible pool) that appears on the preliminary Tier 2 lowest 5% list
c. High schools with a graduation rate of 60% or below for three years
8. Place on the final Tier 2 watch list:
a. all schools on the preliminary Tier 2 watch list that do not show up on the Tier 2 list
b. PLUS any schools from the Tier 1 pool that:
i. are secondary schools
ii. AND did not make it onto the Tier 1 lowest 5% list
iii. AND did not make it onto the Tier 1 watch list
iv. AND have overall performance (on *pr.mr* calculated for all schools statewide) that is lower than or equal to the highest ranked school (on *pr.mr* as calculated only for the Tier 2 eligible pool) that appears on the preliminary Tier 2 watch list

Additional steps for the overall lowest 5% list (schools subject to state reform officer monitoring and/or takeover) and overall watch list (schools in danger of falling onto the lowest 5% list)

1. Place schools onto the overall lowest 5% list if they are on either the Tier 1 or Tier 2 lowest 5% list
2. Place schools onto the overall watch list if they are on either the Tier 1 or Tier 2 watch list

Additional steps/criteria for the small school lowest 5% projection list

1. Rerun the entire Tier 1/Tier 2 process as a projection without the FAY ≥ 30 restriction (replaced by a FAY ≥ 1 restriction), and identify schools as on the small schools lowest 5% projection list if:
a. They were not included in the original run
b. AND they appear on either the projected Tier 1 lowest 5% list or projected Tier 2 lowest 5% list

Additional steps for the Tier 3 list

1. Place schools on the Tier 3 list if they are in the Tier 1 pool, but do not show up on the overall lowest 5% list
2. Place schools on the Tier 3 list if they show up on the small school lowest 5% projection list but did not show up on the Tier 1 or Tier 2 lists in the initial run.

** Note: In addition to publishing the list of persistently lowest achieving schools (PLA) the Michigan Department of Education will publish a state watch list of schools in the lowest quintile (6-20%). This does not affect the PLA ranking or eligibility for the School Improvement Grant, but provides an alert to LEAs to work with these schools to keep them out of the PLA category.