1C Analyze Current Levels of Student Learning

SUMMARY

Key Points

- A school district needs to assess learning achievement to determine whether progress is being made and whether or not the strategies and budgeting approach are succeeding.
- A district should collect data from multiple sources in order to gain a well-rounded perspective on student performance. Summative assessments, such as state summative tests, are the most important assessments for budgeting and planning. Benchmarks and short-cycle/formative assessments also provide performance data. It is important that the information helps determine the district's progress towards its goals and allows for valid year-to-year comparisons. Additionally, to the extent possible, the data collected can allow for further analysis, such as information by school level or student characteristic.
- When measuring student performance with assessment, the measurement system should provide the following perspectives on student performance: comparison against a proficiency standard, relative improvement, and changes over multiple years.

Related Award Program Criteria

- **Criterion 1.C.1: Data Analysis Overview.** The applicant uses a well-rounded set of data that includes assessments data (summative and shorter-cycle), along with other forms of data to monitor both performance standards and changes in performance over multiple years. The applicant can explain its approach to using data in the award application.
- **Criterion 1.C.2: Data Analysis Example.** In the supplementary materials, the applicant can provide a sample presentation of measures that represent its approach to using data.

Introduction

In order to determine whether or not students are making progress toward college or career readiness, a school district needs to assess learning achievement across grade levels. Performance data provides the starting point for determining the current state of student performance in quantifiable terms. This quantified performance baseline can be used to determine how students are currently performing, to identify a desired future level of performance, and to analyze the gap between the two, both district-wide and for individual school sites. Performance data also forms the basis for tracking progress relative to district and school goals and evaluating whether the district and schools have accomplished their objectives.

This best practice document describes:

I. Collecting performance data

II. Measuring student performance with assessment data

I. Collecting Performance Data

Background. Districts should collect data from a variety of sources in order to provide a well-rounded perspective on performance. One key data source is student performance on common assessments. Summative assessments, which review what a student has learned over the course of a year, are the most important assessments for budgeting and planning. Summative assessments should be aligned with learning goals and should measure knowledge and skills that can transfer to real-life situations. Existing requirements for state summative tests may be a good place to start.[1] These requirements may establish what will be assessed and how it will be measured, and may help establish a basis for what level of achievement defines "proficient" or "adequate" for the individual student, as well as collective "cut scores" for schools and districts in the state.[2]

Aligning Assessments and Curriculum

To obtain relevant performance data, assessments should be aligned with curriculum. This will also increase teacher acceptance of the assessment tools, as teachers are more likely to view assessments as a help, rather than a hindrance, to their work.

Other forms of data beyond summative assessments are needed to provide a comprehensive perspective on the district's progress, including benchmark and short-cycle/formative assessments.[3]

Additional important data elements are:

- Absentee rates
- Dropout rates
- Suspension and disciplinary rates
- High school graduation rates (within four years and five years)
- Report card grades
- Measures of college and career readiness (e.g., SAT/ACT scores, percent of students taking advanced placement courses)
- Demographic and socioeconomic information

Note that surveys and observations are also useful for capturing human judgments and opinions that may not be included in formal recordkeeping.[4]

Recommendation. Districts should collect data from student assessments (both summative and short-cycle/formative) and other sources in order to establish a well-rounded perspective on student performance. All data elements collected should, to the extent possible, conform to the following criteria:[5]

- **Relevance:** The data provide relevant information for helping determine the district's progress in meeting its goals.
- **Consistency:** The data is collected in a matter that allows valid year-to-year comparisons.

- **Ability to be disaggregated:** The data can be broken down to reveal important socioeconomic characteristics of various student groups (e.g., free and reduced lunch, English Language Learners) and can also be broken down by school level (e.g., high school, middle school, grade school), school site, and grade level.

II. Measuring Student Performance

Background. The most critical aspects of student performance to measure with achievement testing are math and English Language Arts (ELA) assessment data conducted at multiple grade levels. Districts may also choose to collect data on other areas/subjects, in addition to selecting the type of student performance measure to use. Regardless of which measurement type is selected, the district's complete measurement system should provide the following perspectives on student performance:

- **Comparison against a standard of proficiency.** Districts should assess achievement relative to an established standard of proficiency. (These types of measures are often known as "proficiency" measures or sometimes "status" or "attainment" measures.) Measures of proficiency assess whether students have achieved an established level of mastery of a particular subject relative to a specific standard. For example, how many fourth grade students read at their grade level at the end of a given year? Ideally, the analysis will consider different levels of proficiency, rather than just a binary of proficient versus not proficient. Typical categories include: below basic, basic, proficient, advanced. Proficiency measures are useful because they show performance relative to a meaningful standard; are easily understood by the public; may align well with standards promulgated by outside agencies; and allow comparison to other classrooms, schools, districts, and states. In addition, school districts are usually well equipped to calculate and monitor proficiency measures.
- **Relative improvement.** Districts should assess achievement of students at the end of the year relative to their performance at the beginning of the year. Measuring relative achievement provides insight into learning gains that might be obscured when measuring improvement against a standard of proficiency. This is because measures against a standard tend to focus attention on students that are on the margin of a performance standard threshold and do not account for progress made by students who do not cross a performance standard threshold.[6] Relative improvement measures are helpful because they show learning improvement for all students; however, they are more statistically complex to calculate and difficult to interpret. Two common types of measures that show relative improvement are "value added scores"[7] and "student growth percentiles."
- **Changes over multiple years**. Districts should examine achievement over multiple years. For example, districts may target improvement in aggregate levels of proficiency over time, where a school seeks to increase the share of fourth graders reading at grade level from year one to year five. Multi-year trends give a more complete perspective on performance because they more clearly show the direction of change in performance. Districts do not always improve performance in a linear fashion, so over a five-year time period, performance might decline one year, while the five-year trend line would remain positive. At least three years of data on a given grade level are necessary to effectively measure changes over time and provide reliable results; a five-year timeframe is even better.

Top Performance Measurement Pitfall

The biggest challenge with measuring performance is not a technical one — rather it is creating a climate and culture of trust for effective use of the data.[8] Stakeholders must understand and support the most fundamental reason "why" the data is being collected in the first place. An open and transparent planning and budget process that is clear about what the district aims to achieve by measuring performance is essential to creating such a climate.

School districts might also consider developing and monitoring measures of post-secondary outcomes. For example, districts might measure whether students went to college, if they persisted from the first year to the second, and/or if they required remedial college coursework.

Recommendation. A district should determine how it can use each type of measurement described above, balancing considerations such as: understandability to the intended audience, comprehensiveness of the perspective on student learning, and cost/complexity to calculate. For all types of assessment data, a district should account for different subgroups of students because student achievement often varies systematically across different subgroups. Hence, districts need to disaggregate achievement data to identify performance within and between subgroups. Typical subgroups include gender, socioeconomic status (e.g. free/reduced lunch), traditionally underrepresented minorities (e.g., African American and Latino students), English Language Learners, and special education students. Existing state/federal requirements may establish which subgroups will be tracked and how they are defined. Districts may decide to further disaggregate data for additional insights into student performance.

Endnotes

1 Note that statewide standardized tests are only one form of summative assessment. Districts may use other types as well.

2 A cut score is the dividing point between different levels of performance on a test.

3 Formative assessments test learning during the year and are intended to give more timely feedback than summative assessments.

4 For example, districts may wish to survey students on their views of the academic environment or on perceptions of school safety.

5 From Alan M. Blankstein, *Failure is Not an Option* (Thousand Oaks, CA: Corwin-Sage, 2013).

6 For example, assume a school has a high number of students who are very far below the threshold. Under a measure of improvement against a standard, progress made to advance those students would not be measured unless the students reach the threshold. Hence, a program that significantly advances the learning of a large number of low-performing students might not show good results compared to a program that makes modest improvements to a smaller number of students near to the threshold.

7 Value-added scores capture how much students learn during the school year, thus providing a more accurate measure of the school's impact on student learning than just end-of-year test results because end-of-year results do not take into account where students started. Value-added scores should also control for other variables that impact student learning that are not under the direct control of the school (e.g., attendance) in order to get an accurate picture of how much value the school's activities are adding to the student's academic progress. Explanation of value-added scores adapted from ASCD.com

8 From Alan M. Blankstein, *Failure is Not an Option* (Thousand Oaks, CA: Corwin-Sage, 2013).