



Using Data to Improve Instruction in Five Steps or Less

In a recent conversation, a principal at a Curriculum Leadership Institute (CLI) client district expressed concern about the sixth-grade math team. The district received state test results and it was clear that the sixth-grade students, as a whole, underperformed on one specific state standard. Unsure of the correct course of action, his initial plan was to re-evaluate their current resource. It is possible that the issue may be a misalignment between the current resource and the curriculum, but there are a few things to consider prior to spending the money on adopting a new resource.

Before being able to analyze and address the solution to the problem, the school district must have some essential pieces in place. The first piece is a locally-written curriculum. As stated in a previous E-Hint, state standards or an adopted resource are not synonymous with *curriculum*. But rather, *curriculum* is what your individual district defines as essential skills and knowledge for all students. The second task for the district is to have common assessments in place that are carefully aligned to the curriculum. Each skill and piece of knowledge included in the curriculum must also be assessed in a way that allows students to show they can demonstrate the required learning. Additionally, instructional plans must be created throughout the district. We, at CLI, recommend using a standard planning format for all teachers. We use the Instructional Planning Resource that includes formative assessment (component assessment) with predetermined criteria, teacher methods, student activities, resources, and

differentiation. Instructional plans should be housed in an easily accessible manner so they may be evaluated for effectiveness and, if effective, used from year-to-year.

When all of these pieces are in place educators may begin to look at assessment data. Remember, there are three different types of assessments: formative, interim, and summative. Formative assessments are created and used by individual teachers and PLCs to immediately drive instruction and predict student success on major assessments or high stakes tests. Interim assessments are larger assessments that incorporate several targets (components) and assess at the unit level (outcome). These are formative in nature as re-teaching and re-assessing are still possible. Finally, districts are state and federally required to implement summative assessments, often called state or other standardized tests. These tests are typically used to evaluate a district as a whole. They are considered summative assessments as they are not used to drive instruction for the same population of students since scores are not known during the same school year and re-teaching and re-assessing are not possible.

When teachers receive data from formative and interim assessments, it may be clear what the next steps are in terms of re-teaching and re-assessing. But, when teachers receive data from the previous school year's summative assessments, oftentimes the next steps may be somewhat confusing or daunting. The first thing to keep in mind when

analyzing this data, is to look for big things that stand out. In the example in the introduction, the big “Aha!” was the sixth-grade students underperforming on one entire standard. So now what?

Now, review the three essential pieces already mentioned above: curriculum, assessment, and instruction. Begin with the locally-written curriculum. Check the alignment of the curriculum to the state standards; particularly the standard that students performed poorly on. Ask yourself or your PLC these questions:

- ***Does the local curriculum require the same skills and knowledge as those in the state standards?***
- ***Is the “essence” of the standard the same when it was transferred to curriculum language?***

If the curriculum checks out, and you’ve determined that it is appropriately aligned to the standards, take a look at the corresponding local common assessment (interim) that is in place. Determine if the common assessment is aligned to the curriculum. You may cross-reference the common assessment with the curriculum rather than the standards (since you’ve already critiqued the curriculum for alignment). Ask yourself or your PLC these questions:

- ***Does the content (knowledge) in the common assessment meet that which is in the curriculum? Does it go beyond?***
- ***Do the verbs (skills) in the common assessment align with those in the curriculum? Do they go beyond?***

Then determine if the expected performance on the common assessment is appropriate. Ask yourself or your PLC these questions:

- ***Is it developmentally or task appropriate?***
- ***Is the rigor aligned to descriptions of student performance from the curriculum?***
- ***Did the student performances on the common assessment match the performances on the summative assessment? Are there commonalities in the performances of students that match the data from the summative assessment performance?***

If you’ve determined that your common assessment is properly aligned with the local curriculum, you should move on to evaluating instruction. Ask yourself or your PLC these questions:

- ***Do in-class activities allow for practicing the same types of tasks appearing on the assessment?***
- ***Does the content being taught (amount and type) align with the curriculum/assessment?***
- ***Is the rigor of learning activities high enough to prepare students for the assessment?***
- ***Is there sufficient instruction, practice, and remediation?***

Typically, after evaluating the local curriculum, common assessments, and instruction, you’ll be able to determine the issue and correct it. But sometimes, the issue may not fall within the documented curriculum, assessment, or instruction. If that is the case, ask yourself or your PLC these questions:

- **Do the common assessment and the state assessment value the same skills?**
- **Does curriculum pacing allow for instruction and assessment of appropriate learning prior to state tests?**
- **Have interventions been effective?**

In the example being used, it turned out that the sixth-grade math team was teaching the standard in question *after* the summative assessment was given. So in their case, they were able to re-

organize their pacing to solve the problem, rather than purchase or create a whole new resource. Had they not taken the time to disaggregate the summative data, they could have arbitrarily changed the curriculum, instruction, and/or assessments, or purchased a new resource without seeing any improvement in scores. This type of thorough data analysis undoubtedly leads to overall evaluation of curriculum, instruction, and assessment which benefits both teachers and students.

