Beyond the Numbers
Using Data for Instructional Decision Making
Educators will rarely express that they don’t have enough data. More likely, they think that they have too much data and not enough time to make sense of the data for decisions that matter. Given these constraints, teachers and administrators end up collecting mounds of information that may be used sporadically, typically at the beginning and end of the school year, spurred on by an emphasis on complying with accountability policies and bureaucratic requirements. Data use becomes just another thing to do, placed on an already crowded list.

Because the question of how data serve a purpose is not clear, data are rarely examined, let alone actually used to make instructional improvements. Rather than data driving the decision making, student learning goals should drive what data are collected and how they are used. Data do not speak for themselves but must be interpreted and actively used in order to support instructional improvements. As a tool, data can provide insights about student learning by acting as a portrait, a highlighter, and a springboard.

Data as Portrait

When we ask teachers what data they are asked to examine, inevitably, they refer to test scores. They mention numbers and percentages on district benchmarks or state standardized assessments. They mention rankings or proficiency levels. When we then ask teachers, what information do you use for instructional decision making, they mention formative assessments, student engagement observations, student oral responses, and knowledge of students’ backgrounds. With these responses, it is obvious that teachers believe that external assessments are insufficient to give them the information that they need to plan their instruction. It is also evident that unless they are prompted or encouraged, they view data primarily in terms of quantitative measures on standardized assessments.

All too often, snapshot data, such as summative assessments presented in numbers, are used to overgeneralize or to make assumptions about a student’s academic ability or achievement. Standardized tests are used incorrectly to categorize students into low, medium, or high proficiency levels and to justify ability grouping or classroom placements that remain static. Such uses of one-time snapshot data are problematic not only because of their high-stakes nature, but also because...
standardized tests themselves are not typically designed for such placement purposes.

Schools and teachers can counter these tendencies by ensuring that a wide range of data on student learning is considered when making instructional and placement decisions. How we define what counts as data matters because it directs our energies and concentration on what we collect, examine, and use to justify educational decisions.

At one elementary school, for example, in addition to the regular professional learning community meetings held by grade-level teams, a separate team met to review the progress of English learners (ELs) twice a year. The goal of the meetings was to decide which students qualified for redesignation out of EL status and to support the progress of continuing ELs.

The data form used by the team included two years of data on a student, such as results on the state’s test for ELs with overall scores and domain scores listed for reading, writing, speaking, and listening. In addition, it showed results on quarterly district benchmark assessments in reading, writing, and math for the past two years. It also included a section to note student strengths, areas of improvements, interventions or accommodations that have been tried, and next steps to further support language development.

Although the district provided a set of guidelines that triggered automatic redesignation, the school-based team also had the leeway to redesignate students who did not meet all the criteria, using other data including grades and teacher observations. As they discussed student progress during the meetings, participants accessed different data (e.g., latest district reading benchmark scores, report cards, attendance history) that came up during the conversation.

Data were more than numbers or results on assessments, and they often included a wide range of knowledge and information about the student. This reflected a stance toward focusing on supporting students by understanding their progress and attempting to develop a holistic view of both their strengths and needs.

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**Data as Highlighter**

Data can provide insights into student learning strengths and needs but, more critically, can act as a highlighter of instructional gaps. Examining discrepancies and patterns across
multiple forms of data can help illuminate equity concerns and allow for a more informed picture of student learning. However, the data use process must not stop at the documentation of patterns. Rather, the examination of data must be connected to instructional improvement. Data, then, become a highlighter to understand instructional gaps and goals.

In a data discussion between a teacher and coach, as a teacher described a student’s struggles with vocabulary and lack of motivation when tasks became too difficult, the coach encouraged the teacher to be specific about reading behaviors she noticed in relation to the student. Instead of replying with generalized statements about focusing on the overall reading growth or formulating solutions about reteaching, the coach chose to highlight first what the student could do.

The coach pointed out that the student noticed during read-aloud time what expressive readers do. The student asked the teacher, “How do you do that?” He went on to say, “I can see that.” Although the student could not identify the specific strategy, his questioning indicated that he was aware of differences in how people read. On the basis of this observation, the coach suggested building on this ability to notice what expressive readers do by paying attention to tone, pacing, and visualization strategies.

This approach nudged the teacher to continue to share how she scaffolded the student’s reading comprehension by using various vocabulary building strategies and activities. As they continued to review the student’s growth in using comprehension strategies, they further discussed additional activities to help the student with his reading expression.

Purposefully gathering data during student learning activities can also act as a highlighter for instructional decision making. For example, one teacher developed a unique form to document students’ mathematical understanding. As students worked in groups to solve a complex math problem, she walked around the room and noted their problem-solving strategies, a compliment she could later give them about their work, a teaching point for small group, and future teaching notes for the class as a whole. This tool helped her more systematically document student learning in class (not limiting her assessment of learning to test score data) and linked her observations to instructional decisions for the next day and week.
Data as Springboard

Sometimes data can directly inform decision making, but other times, they simply act as a springboard that leads educators to ask more focused questions about student learning needs or investigate instructional gaps.

In one district we studied, administrators mentored failing students, which involved shadowing students during the school day to better connect students to educational resources in the schools. The mentoring began as an effort to connect more with students; however, a secondary benefit was that it gave district administrators data on how their schools operated from a student perspective.

While mentoring an English learner, the superintendent found that the student was receiving all Fs and little was being done to intervene on her behalf. She also observed that during classes, the student rarely spoke. This led the superintendent to organize professional development for teachers that was centered on student engagement and providing opportunities for students to use language frequently in the classroom. Once again, numeric data do not yield all the answers. In this district, leaders were motivated to look beyond numbers (which showed the majority of students meeting standards) to try to uncover why some students were receiving failing grades.

This stance on data as springboard reflects thoughtful awareness that sometimes more information about students needs to be gathered or investigated in order to gain a fuller portrait of their strengths and needed areas of support. When data analysis leads to further questions or uncertainty about next steps or solutions, educators need to feel comfortable seeking more information instead of developing a partially informed, or misinformed, solution. This includes speaking directly with students to learn about their perceptions and experiences. Students, especially, should be viewed as key sources of their own learning data.

Conclusion

Data can play multiple roles but only if intentionally used as such. Using data for instructional decision making requires thoughtful consideration of both the types of decisions that are being made and the types of data being used. Narrow definitions of data can lead to narrow uses of data, where student
learning skills and abilities are merely categorized or labeled, and simple solutions are designed for complex problems. To use data to enhance student learning and to inform instructional decision making, educators need to consider how data can provide fuller portraits of student learning needs, how the learning needs highlight instructional gaps, and whether additional investigation and data collection are necessary to make sound decisions. Data need to move beyond being driven by numbers to centering on student learning needs.

**MOVING FORWARD**

- Shift from using one-time “snapshot data” such as summative assessments to categorize students’ academic ability levels to ensuring that a wide range of data is used when determining student placement and discussing student progress.
- Recognize that data can identify patterns that highlight instructional gaps and then connect that examination to instructional improvement.
- Use data to make specific statements about student learning and highlight and build on students’ capabilities and strengths first.
- Look at data for clues that can help you better understand student learning needs, seeing beyond the numbers to identify when more information should be obtained to avoid developing a misinformed solution.
- Ask students about their experiences as learners to get a more informed picture of their learning needs and perspectives.

**BIBLIOGRAPHY**


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