Data Walls Demoralize Students. Assessment Expert Lorrie Shepard Explains Why

Google the phrase "data wall" and thousands of pictures of brightly colored charts will decorate your screen. These colorful wall hangings depicting student assessment results gained traction in the wake of the test-score-based accountability measures emphasized by the federal No Child Left Behind Act of 2001, and their popularity has not waned with the law's 2015 reauthorization as the only slightly less test-score-focused Every Student Succeeds Act. The walls are supposed to motivate students to improve by showing them exactly where they stand relative to their peers.

The problem is, years of research have shown that motivation doesn't work that way.

In the Q&A below, NEPC Fellow and classroom assessment expert Lorrie Shepard explains what's wrong with data walls and other approaches common to the "data-driven culture" spawned by federal accountability measures. Instead, Shepard describes alternative approaches that help students understand what they need to do to improve, while helping teachers understand what students do and do not comprehend.

A Distinguished Professor and Dean Emerita in the School of Education at the University of Colorado Boulder, Shepherd's research focuses on psychometrics and the use and misuse of tests in educational settings. She has served as President of the American Educational Research Association, the National Council on Measurement in Education, and the National Academy of Education.

Q: Educators are often encouraged to embrace a "data-driven culture." What can research tell us about how teachers can use data effectively in the classroom?

A: *The idea behind "data-driven decision making" is a good one. It comes from the field of business management and is about using data to continuously improve. However, in education, the word data mostly means test scores, and standardized test scores don't tell teachers what they most need to know to help students learn. At best, test scores tell teachers which students need more help or which objectives need to be retaught for the whole class, but tests don't reveal anything about what students are thinking or what misconceptions might be causing difficulties. Scores don't provide substantive insights, and unfortunately the data focus since the No Child Left Behind legislation has led to some harmful practices such as public posting of test results on data walls.*

Once-per-year state test results could be used effectively, if teachers studied them every August to identify relative strengths and weakness in their class averages from the previous year and made appropriate adjustments in their curriculum for the upcoming school year. As for the many other computer-delivered tests administered throughout the school year, it would be much better if teachers looked at student work on open-end problems to make instructional adjustments.

Q: You mentioned a problem with data walls, can you explain what they are and why they might be a problem?

A: *Data walls became a widespread practice in schools after the passage of No Child Left Behind. Because of the negative consequences attached to accountability test results, district leaders began posting each school's results in the superintendent's office, followed by each teacher's score being posted in school hallways, and ultimately each child's proficiency scores being posted in their classroom. Data walls have many different forms, but the most common format posts children's pictures or names in big red, yellow, or green areas on the wall indicating whether they are a basic, proficient, or advanced learner. For all but the advanced learners, this is a form of public shaming that does emotional harm and also undermines the learning goals data walls are intended to foster.*

Advocates who claim (falsely) that data walls are motivating for students are not acquainted with the extensive research literature on motivation. Intrinsic motivation to learn is helped when students receive feedback that tells them how to improve. But, interest in learning and willingness to invest effort in learning are actually harmed if students are given "normative" feedback that compares them to other students. Data walls are a perfect example of "normative" comparisons that tell students where they stand compared to their classmates. Embarrassing comparisons have a negative effect even in those cases where students are given an anonymous ID number instead of posting their picture, because students know what it means if they see themselves as a red or a yellow learner.

Q: What does research-based formative assessment look like in the classroom?

A: *What we know from research on learning is that the best formative assessment should be completely embedded in instructional interactions. Children should be engaged in solving authentic, challenging problems and should be called upon to explain their reasoning so that teachers can see and build upon their current level of understanding. Feedback from the teacher, and feedback that students learn to give to each other, should be about how to improve. Children should learn how to self-assess, not to give themselves a grade but*

todevelop their own understanding about the qualities of good work. As much as possible, formative assessment should be separated from grading because grading has been shown to undermine curiosity, interest, and deep learning of content.

Q: Do schools need to use commercial formative assessment products in order to ensure best practices are consistently adopted at scale? Why or why not?

A: *Most commercial formative assessment products are not compatible with the research on meaningful formative assessment. This is because computer-delivered, commercial products were developed in response to accountability mandates. These products are most often called interim or benchmark tests. They look like standardized tests and not like authentic instructional tasks. Products that are entirely based on multiple-choice test questions do a good job of ranking students from the highest to the lowest, but they don't provide good diagnostic information; drilling to get better on such measures improves rote learning, but does not develop conceptual understanding. School districts would do better if they invested in curriculum development with embedded formative tasks and in teacher professional development instead of spending so much money on over-testing students.*

NEPC Resources on Assessment

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