

Using Data to Determine Student Mastery

Teachers and students are bombarded with data figures from national, state, and local assessments. Interpreting those figures and determining areas where students are strongest and weakest is a practice that is becoming more and more important given the national call for accountability. In addition, teachers are expected to develop an assessment system that yields data about student growth.

In today's education landscape, the phrase "data-driven instruction" is very common. The pressure to use data analytics to drive student achievement can be felt from the legislative floor to the board room to the classroom and to the living room. Schools and teachers are being held accountable for proving student achievement in unprecedented ways, including tying teacher salaries to student scores on standardized tests.

Accountability in the modern American school systems began with the introduction of the Elementary and Secondary Education Act (ESEA) in the 1960s and became a driving factor in the 1990s with the implementation of No Child Left Behind (NCLB). Today, the pressure to improve America's schools stems from the belief that our graduates are not prepared to compete in the global market. In response, the federal government enacted legislation such as the Race to the Top program, which has shifted the philosophy of education toward not only global competition, but also competition among neighboring states and even districts within the same state.

In this climate, a school must identify the role of data and which assessments the school will use to tell the story of its progress. This is often exemplified in a school's vision and mission statement. School leaders and staff need to be clear about how they define, measure, and report their success. In this course, you will learn why and how the definition, measurement, and statistics need to be aligned to provide an accurate record of the effect instructional practice is having on student mastery.

Course Objectives

By the end of this course, you will be able to:

Module 1

- Define data literacy and high-level elements of data analysis.
- Determine the current data sources and schedule of assessments.

Module 2

- Analyze the role of assessment in informing instruction.
- Demonstrate knowledge of formal and informal assessment methods.
- Create ways to share learning targets with students.

Module 3

- Align assessments to learning targets.
- Analyze the value of formative assessment.

Module 4

- Define critical thinking skills required for different levels of mastery.
- Analyze assessment questions for level of rigor.
- Plan and develop a series, or cycle, of questions for unit/lesson standards.

Module 5

- Identify primary characteristics of an effective grading system.
- Compare standards-based grading practices with traditional grading.
- Evaluate your grading practices.

Course Syllabus

Module 1	The Science of Data Module Welcome <ul style="list-style-type: none"> • Video 1: A Visit to a Data-Driven School District • Reading 1: The Science of Data • Reading 2: Data Literacy Skills • Video 2: Guiding School Improvement • Knowledge Check • Case Study: Walt Whitman Elementary School • Application: Examine Data Collection and Use • Post-Module Reflection
Module 2	Using Data Purposefully Module Welcome <ul style="list-style-type: none"> • Media: Assessment Basics • Video 1: Student Work: How Is It Used? • Reading 1: <i>EL</i>—Answering the Questions that Count • Video 2: Pre-Assessment and Diagnosis • Reading 2: Sharing Learning Targets and Criteria for Success • Knowledge Check • Application: Evaluate Assessment Use • Post-Module Reflection

Module 3	Gathering Formative Data Module Welcome <ul style="list-style-type: none"> • Excerpt: What Is Formative Assessment? • Video 1: Key Characteristic of Formative Assessments (Curriculum-Driven Learning Goals) • Reading 1: <i>EL</i>—Asking Questions—At Four Different Levels • Video 2: Key Characteristic of Formative Assessments (Needs-Based Lessons) • Reading 2: <i>EL</i>—The Many Uses of Exit Slips • Knowledge Check • Application: Planning for Formative Assessment • Post-Module Reflection
Module 4	Questioning Strategies to Assess Mastery Learning Module Welcome <ul style="list-style-type: none"> • Reading 1: <i>EL</i>—Asking Good Questions • Reading 2: <i>EL</i>—Preventing Feedback Fizzle • Optional Reading 3: <i>EL</i>—Thinking Is Literacy, Literacy Thinking • Video: Check for Understanding: Asking Questions • Knowledge Check • Application: Evaluate Classroom Assessment • Post-Module Reflection
Module 5	Reporting Mastery Module Welcome <ul style="list-style-type: none"> • Reading 1: <i>EL</i>—Reporting Student Learning • Reading 2: <i>EL</i>—Seven Reasons for Standards-Based Grading • Reading 3: <i>EL</i>—How I Overhauled Grading as Usual • Video: Portfolio Assessment • Knowledge Check • Application: Evaluate Your Grading Practices • Post-Module Reflection

Resources

- Amundson, L. (2011). How I overhauled grading as usual. *Educational Leadership*, 69(3), pp. 1–4. Brookhart, S. (2012). Preventing feedback fizzle. *Educational Leadership*, 70(1), pp. 24–29.
- Brookhart, S., & Moss, C. (2009). *Advancing formative assessment in every classroom: A guide for instructional leaders* (pp. 24–31). Alexandria, VA: ASCD.
- Marzano, R. J. (2013). Asking questions—at four different levels. *Educational Leadership*, 70(5), pp. 76–77.
- Marzano, R. J. (2012). The many uses of exit slips. *Educational Leadership*, 70(2), pp. 80–81. O'Connor, K., & Wormeli, R. (2011). Reporting student learning. *Educational Leadership*, 69(3), pp. 40–44.
- Reeves, D. (2004). *Accountability for learning: How teachers and school leaders can take charge* (pp. 29–32). Alexandria, VA: ASCD.
- Roberts, T., & Billings, L. (2008). Thinking is literacy, literacy thinking. *Educational Leadership*, 65(5), pp. 32–36.
- Ronka, D., Lachat, M., Slaughter, R., & Meltzer, J. (2008). Answering the questions that count. *Educational Leadership*, 66(4), pp. 18–24.
- Scriffiny, P. L. (2008). Seven reasons for standards-based grading. *Educational Leadership*, 66(2), pp. 70–74.
- U.S. Department of Education, Office of Planning, Evaluation and Policy Development. (2011). *Teachers' ability to use data to inform instruction: Challenges and supports*. Washington, D.C.
- Vogler, K. (2008). Asking good questions. *Educational Leadership*, (65). Retrieved from <http://www.ascd.org/publications/educationalleadership/summer08/vol65/num09/Asking-GoodQuestions.aspx>
- ASCD (2006). *A visit to a data-driven school district*. [DVD]. Alexandria, VA.
- ASCD (2004). *Balanced assessment: Improving student achievement and standardized test results*. [DVD]. Alexandria, VA.
- ASCD (2002). *Examining student work*. [DVD]. Alexandria, VA.
- ASCD (2000). *Guiding school improvement with action research: Books-in-action*. [DVD]. Alexandria, VA.
- ASCD (2008). *The power of formative assessment: Increasing motivation and achievement*. [DVD]. Alexandria, VA.
- ASCD (2008). *The power of formative assessment: Strategies for checking for understanding*. [DVD]. Alexandria, VA.