

# THE DATA- DRIVEN CLASSROOM

*How do I use student data to  
improve my instruction?*

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generate ideas, develop hypotheses, design a scientific investigation, collect data, analyze those data, draw conclusions, and then start the cycle all over again by developing new hypotheses. Likewise, educational practitioners can use the scientific method to explore and weigh our own options related to teaching and learning. This process is still trial and error, but the “trial” piece becomes a lot more systematic and incorporates a good deal of professional reflection (Mertler, 2009). And, like the scientific method, the decision-making process I describe in the following sections is *cyclical*: the data teachers gather through the process are continually used to inform subsequent instruction. The process doesn’t just end with the teacher either deciding the strategy is a winner or shrugging and moving on to a new strategy that he or she hopes will work better.

A major reason teachers don’t rely more on assessment data to make instructional decisions is the sheer volume of information provided on standardized test reports. One teacher comment I often hear is, “There is so much information here that I don’t even know where to start!” One way to make the process less overwhelming is to focus your attention on a few key pieces of information from test reports and other assessment results and essentially ignore other data, which are often duplicative.

Another anecdotal comment I often hear from teachers provides a reason why many educators resist relying on assessment data—that is, the belief that using test results to guide classroom decision making reduces the educational process to a businesslike transaction. It’s true that in business

- Where are these concepts/skills addressed in our district's curriculum?
- At what point in the school year are these concepts/skills taught?
- How are students taught these concepts/skills?
- How are students required to demonstrate that they have mastered these concepts/skills? In other words, how are they assessed in the classroom?

Answers to these questions, as well as to others that will undoubtedly arise during the process, often provide important information that will ultimately guide decisions regarding instructional revisions. The specification of these revisions—which could consist of identifying new or different methods of instruction, incorporating new supplemental materials or activities, reorganizing the sequence of instructional topics, or developing or using different types of classroom assessments—constitutes the fourth and final step in the process.

An example of group-level decision making follows.

### **Example #2: Group-Level Decision Making**

Mr. Scott is an 8th grade mathematics teacher. He was initially quite pleased as he looked over his class's score report from the most recent statewide mathematics achievement test. His class's average scaled score of 412 was well within the Proficient range, equal to the state average, and only slightly below that for the entire school and district. Only 21 percent of the students in his class achieved a score

Again, this should sound familiar: it's very similar to the process for data-driven educational decision making. Just like that process, action research never really ends. The action research may continue along the same line (i.e., topic or problem of interest) in subsequent cycles, or it may branch off in a different direction. This is not unlike an educator's professional growth and development; sometimes, we feel the need to further our professional development in a particular area, whereas other times we think it's important to grow in a different direction.

### **Why Is Action Planning Important?**

Let us focus our attention on the third stage of the action research cycle: the developing stage. In an action research context, the developing stage consists of taking the results from the collection and analysis of data, your interpretations of those results, and the conclusions that you have drawn and decisions made and use all of that information for developing a plan of action for the future (Mertler, 2014). The action plan may consist of strategies for future implementation of interventions or revisions and improvements to instructional practice. You may also include in the action plan ideas and designs for future cycles of action research. Therefore, an action plan is essentially a plan for how the outcomes of a particular action research project will (1) *guide future practice* and (2) *direct future cycles of action research*.

This concept of action planning applies to data-driven decision making in exactly the same manner as it does to an