How Can Teachers Use Data Effectively?

Data-driven decision making has been a hot topic for the past ten years. Schools and teachers use data in many ways. Schools use data to evaluate existing programs and make decisions, such as where to target resources. Teachers use data to modify classroom instruction to fit the students’ needs better. Most promisingly, schools and teachers work together to use data for inquiry into trends in students’ achievement, to determine why trends occur and how to improve uncovered weaknesses. Establishing such an inquiry process may seem overwhelming to time-strapped teachers, but with support from the school and commitment to the three steps in effective data use, using data to improve students’ achievement is manageable for every teacher!

What are the steps for using data to guide decisions about practice?

Effective data use is a continuous cycle with three steps—data collection, data analysis, and intervention. For data collection on targeted content goals, annual test data is a good place to start. Organizing the data from annual tests already in place so that it helps analyze strengths and weaknesses is crucial. Instead of merely noting summaries of students above and below expectations, the team must pinpoint problem areas and monitor progress over time. We encourage schools to contact local experts, such as university researchers, for help.

For data analysis, teachers must collaborate actively in identifying and examining patterns, asking questions to pinpoint further specific areas of weakness and to suggest possible causes. When making hypotheses, teachers should focus on instruction and not on factors outside their control. Consider, also, that teachers may be able to answer their hypotheses by looking closer at existing data. Often, however, the team will decide that several of their suggestions will need further exploration.

For intervention, teachers must brainstorm strategies to improve students’ achievement in those designated areas. It is extremely important that the suggested strategies be manageable for teachers. If teachers cannot actually enact the intervention, it will certainly fail. Once agreeing on manageable strategies, the team should set specific, measureable goals to determine whether or not the intervention is working. This step brings us back to the first step—collecting data in order to track the progress toward each specific goal in a continuous cycle of school improvement.