DOINGWHATW⌀RKS

Supporting Teachers in Understanding and Using Data

Ellen B. Mandinach, Ph.D. • June 2010

Topic: Using Student Achievement Data to Support Instructional Decision Making
Practice: Data-Driven Culture

Highlights

- Dr. Ellen B. Mandinach discusses the importance of providing professional development to help teachers learn how to use data.

- She emphasizes the need for the professional development to be aligned with the school's goals and needs.

- The professional development should be timely and ongoing. It should be provided close to the time that the teachers will examine data.

- Teachers need to learn how to interpret the data and apply it to instructional decision making.

About the Interviewee

Dr. Ellen B. Mandinach is a senior research scientist at WestEd. Prior to joining WestEd, she was a senior project director at CNA Education and served as the interim director of the Regional Education Laboratory (REL) Appalachia and the director of research for REL Northeast and Islands. From 2002 to 2010, Dr. Mandinach has focused her work on examining data-driven decision making

under grants from the Institute of Education Sciences (IES) and the National Science Foundation, and for projects under REL Appalachia. In 2010, she became the principal investigator on the IES project Using Data to Inform Practice, which examines the impact of training teachers to use data on classroom practice and student performance. She also served as a member of the Technical Working Groups for the U.S. Department of Education-funded project on data-driven decision making and for the National Institute of Statistical Sciences and Education Statistics Services Institute project to understand how researchers can make better use of statewide longitudinal data systems. In 2008 Teachers College Press published her book *Data-Driven School Improvement: Linking Data and Learning*. Dr. Mandinach was also a panelist on the IES Practice Guide *Using Student Achievement Data to Support Instructional Decision Making*. Dr. Mandinach holds a Ph.D. in educational psychology from Stanford University and specializes in educational measurement.

Full Transcript

My name is Ellen Mandinach. I am at WestEd and was a panelist on the IES practice guide dealing with data entitled *Using Student Achievement Data to Support Instructional Decision Making*.

The primary goal for training around data-driven decision making should be that it is actionable. Data in the abstract are meaningless. They have to be transformed into information and ultimately to actionable knowledge. So for a teacher, it means that the data must be transformed in a way that makes sense to inform instructional practice. An example around actionable information might be something to do with taking formative test results. If a teacher gets formative data, he or she then must understand that it's not just numbers that they are using, but that those numbers represent information that can be transformed into how he or she defines the kinds of instruction that a student may need.

Around the topics of professional development on data-driven decision making, there are a couple of things to keep in mind. One of the most important is that there are certain skills and content knowledge that a teacher may need to have around data-driven decision making. Those would include cognitive skills like how to collect data, how to organize, summarize, analyze, prioritize data. It really becomes a feedback loop. So these are fundamental cognitive skills that a teacher will need to bring to bear as he or she is analyzing data. The same with an administrator as well. But other topics that are important include what one might call high-capacity data strategies. These are topics such as what do you do to differentiate instruction based on data, what do you do about using multiple sources of data. So you are using formative assessments, summative assessments, benchmarks, locals, classroom assessments, classroom assignments—how do you take all of those disparate data sources, bring them together to make sense, and then use them from which you can then make an actionable decision.

In terms of format and structure, one of the important things is the alignment of the professional development to the needs of the school, both in content and in subject matter. So for example, in mathematics, you may want to structure the professional development around the content for, say, elementary mathematics or high school algebra. You may want to align it to the standards that the school

is using. One of the foremost issues is whether you do it on an ongoing basis or an ad-hoc basis. The literature firmly states that it is important to make sure that it's continuous, that it is tied to the needs of the educators, and that they see that the outcomes will be effective for their own practice. If they don't understand the ramifications of the professional development around data, then they are not likely to use it.

Another format and structure that is important is that the timing of it is vitally tied to when they are going to use it. It's a "use it or lose it" paradigm. So if you do summer training and then the teachers go back to school and they are not examining data for several months, then they may forget everything that the professional development has invoked to them. For example, a project on which I am working is using a model of professional development that consists of several sequences of training sessions, interspersed across several months, where the teachers will be trained, have workshops, go into their classrooms, try things out, come back, think about what needs to be done, ask the professional development providers for technical assistance, and it's an iterative model.

Another issue that is to be considered is the model of collaboration. The teaming around data-driven decision making is very, very much important. So the structure of professional development should be for schools to bring data teams to the table to be trained together. So that model of having multiple people from the school working together and, on an intermittent basis, getting professional development, working through in their school the issues, learning to use data, and then coming back around the professional development is a model that has been shown to be very successful.