



Video

FULL DETAILS AND TRANSCRIPT

What Do You See in These Data?

Elizabeth A. City, Ed.D. • October 2009

Topic: Using Student Achievement Data to Support Instructional Decision Making
Practice: Cycle of Improvement

Highlights

- It's helpful for teachers to use protocols when talking about data. Protocols can provide a framework to explore the data.
- You can ask questions such as, "What do you see in these data?"
- Consider other data to explore and establish next steps for instructional planning.
- Visual representations of data such as charts, tables, or graphs can help you see patterns or trends in the data.

About the Interviewee

Elizabeth A. City is executive director of the Doctor of Education Leadership (Ed.L.D.) Program and lecturer on education at the Harvard Graduate School of Education. She has served as a teacher, instructional coach, principal, and consultant, in each role focused on helping all children, and the educators who work with them, realize their full potential. She holds a doctorate in administration, planning, and social policy from the Harvard Graduate School of Education. Her publications include *Strategy in Action: How School*

Systems Can Support Powerful Learning and Teaching, coauthored with Rachel E. Curtis (Harvard Education Press, 2009); *Instructional Rounds in Education: A Network Approach to Improving Teaching and Learning*, coauthored with Richard F. Elmore, Sarah E. Fiarman, and Lee Teitel (Harvard Education Press, 2009); *Resourceful Leadership: Tradeoffs and Tough Decisions on the Road to School Improvement* (Harvard Education Press, 2008); *The Teacher's Guide to Leading Student-Centered Discussions: Talking About Texts in the Classroom*, coauthored with Michael S. Hale (Corwin Press, 2006); and *Data Wise: A Step-by-Step Guide to Using Assessment Results to Improve Teaching and Learning*, coedited with Kathryn Parker Boudett and Richard J. Murnane (Harvard Education Press, 2005).

Full Transcript

My name is Liz City. I am the executive director of the Doctor of Education Leadership Program at the Harvard Graduate School of Education, where I am also a lecturer on education.

When you have collected all of your data, you are facing a large pile of data. Sometimes it's hard to know how to dive in and how to analyze those data. One of the things that I have found very helpful in my work is using protocols, or structured-based conversations. Especially when you are talking about data with other people—which is really the best way to talk about data, is to do it with other people—they will see things you don't see; you will collectively decide what to do next. But the thing is, you have very limited time in school. You may have 45 minutes for your common planning time, and you need to figure out how to efficiently use your time to look at data and get somewhere with it. So different sorts of protocols can be very helpful, even if it's as simple as, "We are going to start with what do you see in these data," to slow yourself down from everybody leaping to conclusions and deciding what to do about the data, which is something we educators often do. We want to do something for kids, we want to very quickly leap to something that's going to be helpful for students, so we go from data to solution in five minutes. Well, that's not very helpful because you've skipped the whole inquire part of the data cycle. You skip saying, "Why do the data look this way? What are we seeing here? What do you notice?" So, often we use protocols that start with "What do you see? What do you notice? What kinds of questions do you have as you look at these data? What other data might we want to explore to dig into these questions some? And what are our next steps based on what we are seeing in these data?" So something very simple like that can be helpful for looking at data.

Another thing that can be helpful is, before you sit down in your collaborative team meeting with those data, if somebody has processed the data a little bit, especially if there is number data, interim or standardized test data. Can you move the data from charts and numbers to try to make pictures out of the data? That will also help us be more efficient. If we are looking at a bar graph instead of trying to look at lines and lines of numbers, can we just look at the picture to try to see, "Oh, what's the story line here?" Whenever you are looking at data, you are trying to figure out: What do I see, what are the patterns, what's

the story line, what are these data telling me, and now what do I want to know? So that's really a strategy for using data. It's not too fancy. You don't need fancy programs necessarily. They can be helpful, but really just sitting down with those kinds of questions can help you work through data quite efficiently.

Whenever you are looking at data, you want to ask the question *why*. You also want to think about using data like you are a scientist, which for those of us like myself who were English teachers doesn't come naturally. But you want to think about it like a scientist. You are presented with something and you want to ask *why*. Why do the data look this way? So you might say "testable hypotheses" but what you're really trying to figure out is *why*. So when you look at a set of data, you are going to ask the question *why*. A very popular protocol that comes out of the business sector is to ask *why* five times. You ask it once, "Why do the data look this way." And then you say, "Ah, we have an answer. Why is that true?" So I will give you an example. We are struggling with students drawing inference when they are reading, a very common problem in many schools. So why are students struggling to draw inference? Well, we are not sure we are explicitly teaching inference. Okay, *why*—*why* aren't we teaching inference? Well, we are not sure we share a common definition of what inference is. Hmm, *why* don't we share a common definition of what inference is? Well, we haven't really done professional development on inference. We have been really focused on comprehension, but we think inference might be different. All right, *why* haven't we done professional development on inference? Because we haven't allocated our time to that, and maybe if we focus on that, we could allocate our professional development time to it. So if you ask these five *whys*, you stop when you get to something actionable.

A couple of other characteristics of testable hypotheses are, one, that they are testable, that you could figure out what data would I look at to try to answer this question to see if we are right about this hypothesis. So I will give you an example. It was in a district in Iowa, not too long ago, and they were struggling with transfer. They said, "You know what? Students aren't transferring their knowledge from class to class within the same grade or from grade to grade. They know something in fifth grade, and then they go to sixth grade and it's like they were never taught it." Something many of us have experienced as teachers. So they said, "Why are students struggling with inference [transfer]? What are our hypotheses?" They said, "Well, we think it might be because we are not really giving them high-level tasks, and we think we are maybe not giving them enough opportunity to apply those tasks, and we think that maybe we are doing all the work—that we're up there teaching our brains out and students are just sitting there. So let's see if we can test those hypotheses." They then made a theory that said if we taught students and had them do the work, if we gave them opportunities for application, and if we gave them high-level tasks, then we think they would transfer.

One of the things that's helpful with testable hypotheses is that you have some kind of theory about how you think the learning should be working that you are tying back to. In this example in Iowa, they had that theory coming out of their own experience and also the literature. They went in and read about transfer—what do we know about transfer, what does the brain research say about how transfer works? And then

they narrowed down their list of hypotheses to those three and then observed in classrooms to test their hypotheses.