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**Increased Student Achievement and School Improvement are Our Goals
Inquiry-Based Data-Driven Decision Making is Our Solution**

Inquiry-Based Data-Driven Decision Making: Part 2: What Research Says

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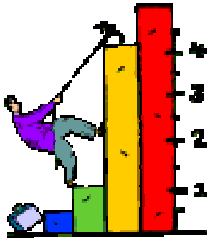
**Inquiry-Based Data-Driven Decision Making:
Part 2—What the Research Says**

Inquiry-Based Data-Driven Decision Making:
Part 2—What the Research Says about Inquiry-Based Data-Driven Decision-Making.
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**What Research Says: Inquiry-Based
Data-Driven Decision Making's
Impact on Student Learning**



In order to understand the importance of data-driven decision-making

on our school improvement and student achievement efforts, imagine that we are told we have to reach a place called Volinia by nightfall or we will lose everything. We have no idea where it is. Yet, we are told we can't use any maps or data to locate it, so we start out driving aimlessly in hopes of reaching our destination, but we know the chances are slim to none that we will find it on time. The same is true if we start our school improvement or student achievement efforts without doing a thoughtful data analysis. "Statistical data on

school programs and student performance provide educators with our only real evidence of the success or failure of educational programs. Data 'identifies the link between teaching practices and student performance so that high achievement levels can be obtained' (Miller 2000 qtd. in Wade 2001)".

Mike Schmoker advocates keeping this focus narrow. As he points out, "There is a marked difference between vague, well-intentioned improvement efforts and carefully targeted, goal-oriented, short-term efforts aimed explicitly at getting measurable, substantive results quickly" (qtd. in Sparks Winter 2000). For this to happen our decision-making efforts need to be more than data-driven; they need to be inquiry-based as well.



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There is a substantial body of research pointing to the fact that inquiry-based data-driven decision making has a powerful effect on the school improvement/student achievement processes (Aldersebaes, Potter, & Hamilton 2000; Barnes 2004; Bernhardt 2000; Bernhardt 2003; DuFour 1997; Feldman, & Tung 2001; Feldman, Lucey, Goodrich, & Frazee February 2003; Killion & Bellamy Winter 2000; Love 2004; Marzano 2003; Protheroe Summer, 2001; Rallis & MacMullen June 2000; Scherer February 2003; Schmoker 1999; Wade 2001; Wellman & Lipton 2003).

Killion and Bellamy found that:

“Data analysis increases the schools’ use of data and strengthens improvement efforts...(by allowing the schools)... to answer their questions

about programs and student achievement. As a result, their school improvement efforts are more on target. Schools no longer select arbitrary goals, but rather identify core problems and set goals to align with them. Schools slow down their actions and are not rushing to implement untested strategies to solve problems. Instead, they research possible interventions and conduct mini-pilots to determine which intervention are most appropriate for their students and staff.

Schools are more thoughtfully analyzing formative data to make mid-course corrections and to avert potential problems with implementation” (Killion & Bellamy 2000).

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This was further born out by Wade's findings that when teachers "acknowledged and accepted (data), data could lead to the formulation and implementation of corrective courses of action that could solve problems and meet a school's goals. Once improvement strategies were under way, educators could continue to analyze the data to monitor and refine their efforts" (Wade December 2001).



Thus "there is a growing body of evidence that the use of high-quality, targeted assessment data, in the hands of school staff trained to use it effectively, can improve instruction" (Protheroe, Summer, 2001) and lead to greater student achievement—which is our shared end goal—the one thing at which all of our efforts are aimed.

As Feldman and Tung point out, "Through program improvements brought about by data analysis, a higher level of achievement can also be expected of students. In some cases, students have even begun emulating the practices of data inquiry they see their teachers modeling, conducting their own student surveys and analyses" (Feldman and Tung qtd. Wade 2001).

Given all of this, it is little wonder that "*using data to drive improvement* was identified as a key to success in a report developed by the National Education Goals Panel" (Rothman 2000, qtd. in Protheroe Summer, 2001).

Therefore, inquiry-based data-driven decision making is an important tool for us to use as we investigate the relationships that exists between the way things are now and how we would like them to be. It helps

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us to uncover our own assumptions and deal with them in a positive non-punitive way. It lets us focus as a team on the same data sets and come to a collective agreement on what the data mean. It allows us to agree to a course of action and be honest about what it will take to turn that plan into a reality (Wellman & Lipton 2004). It even helps us direct and structure the types of professional development that will most impact student achievement (National Staff Development Standards: [Data-Driven](#)).

However, “if data are to provide meaningful guidance in the process of continuous improvement, teachers and administrators require professional development regarding data analysis, designing assessment instruments, implementing various forms of assessment,

and understanding which assessment to use to provide the desired information. Because the preservice preparation of teachers and administrators in assessment and data analysis has been weak or nonexistent, educators must have generous opportunities to acquire knowledge and skills related to formative classroom assessment, data collection, data analysis, and data-driven planning and evaluation” (National Staff Development Standards: [Data-Driven](#)).

By “learning to incorporate data analysis as a regular part of their professional activity, teachers become more reflective about their teaching practices, less reactive, less willing to accept easy answers, and more open-minded to solutions based on the data they gather. As a whole, the school assumes a more professional and civil

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culture of inquiry, in which "teachers share with each other important questions and ideas related to teaching and learning" (Feldman and Tung 2001 qtd. in Wade 2001).

In all these ways, inquiry-based data-driven decision making helps make our student achievement goals a reality. Therefore, "the inquiry cycle is an integral and natural process of professional practice for any good teacher or principal. (By using it) professional educators make decisions that are student-centered and knowledge-based. (Through it, we use) reflective inquiry...to foster effective learning" (Rallis & MacMullen June 2000) for all students. Thus inquiry-based data-driven decision-making is at the core of all learner-centered schools.

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