

A DATA COACH'S GUIDE *to* IMPROVING LEARNING FOR ALL STUDENTS

Unleashing the Power of Collaborative Inquiry



By Nancy Love,
Katherine E. Stiles,
Susan E. Mundry, and
Kathryn DiRanna

The following excerpt comes from the introduction to *A Data Coach's Guide*, a new publication from Corwin Press.

Despite endless pessimistic messages about the state of public education, as staff of the National Science Foundation-supported Using Data Project, we find much to celebrate. Over the last few years we have applied the Using Data Project in schools that are serving among the poorest children in this country—children from Indian reservations in Arizona, the mountains of Appalachia in Tennessee, and large and mid-size urban centers in the Midwest and West.

A few years ago some of these children were simply passing time in school with “word search” puzzles or other time fillers; some were permanently tracked in an educational system that doled out uninspired, repetitive curriculum. Some of the schools in which we worked had not one single student pass the state test, and the vast majority were performing at the lowest proficiency level.

Today schools implementing the Using Data Process have narrowed the achievement gaps between students with exceptional needs and general education students in all content areas and grade levels; tripled the percentage of African Americans proficient in middle school mathematics; demonstrated significant and steady gains in mathematics in elementary, middle, and high schools; and cut the failure rate of Native American children in half. Students in these schools are reaching proficiency on assessments in record numbers.

Improving schools give us hope. They dispel the myth that some students cannot learn. They inspire us to even greater levels of commitment to take on the biggest problems that schools face: cultures rife with resignation, isolation, stagnation, and mistrust; racist and classist attitudes and practices that result in failure to see and serve students who do not look or act like the dominant culture; outdated and inexcusable instructional practices; teachers who are not as well prepared to teach to rigorous content standards; and ineffective and dangerous uses of student data.

With our collective decades of work in school improvement, we do not underestimate the grip these problems have on schools' and educators' spirits. Yet we have witnessed every one of these seemingly insurmountable barriers begin to fall away when school teams learn to work together and use data and research to identify and tackle the causes of student failure.

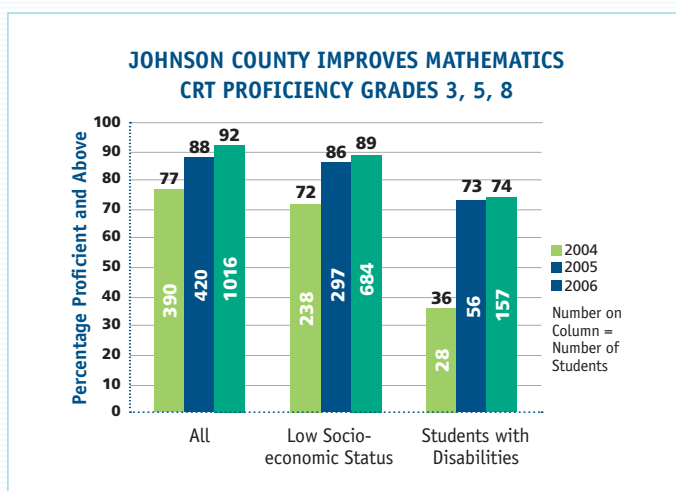


Figure 1 Math and reading scores in Johnson County, Tennessee, improved in grades 3, 5, and 8, nearly eliminating the gap between regular education and special education students.



We know it can be done. Our new book, *A Data Coach's Guide*, is designed to inspire and help you as you use collaborative inquiry to achieve similar or even greater success in your own schools.

How the Book Came About

Beginning in 2003, the Using Data Project, a collaboration between TERC and WestEd, set out to develop, pilot, and field-test a program to provide educators with the skills, knowledge, and dispositions to put school data to work to improve teaching and learning and close achievement gaps.

The project conducted two national field tests. While our efforts focused on mathematics and science improvement, the schools quickly applied the Using Data Process to all other content areas. Field-testers gave us immediate feedback on the materials and, in several cases, took the materials and implemented them in schools in which they were working in Los Angeles, California; Colorado Springs, Colorado; and Johnson County, Tennessee (Figure 1). Through the rich experiences and work with our partner schools, the project gleaned a wealth of technical and practical knowledge about how to prepare Data Coaches to work with teams in diverse settings, from large urban areas to mid-size cities to small rural schools. This book is the product of that work.

Get Ethical, Get Technical: The Purpose of the Book

Author and cultural proficiency expert Franklin Campbell Jones says, “Get ethical before you get technical.”¹ School improvement without will and moral purpose—without a genuine commitment to all students—is an empty exercise in compliance that, in our experience, can do more harm than good. We have seen educators use data to “more accurately”

USING DATA PROJECT PARTNERS

- Clark County School District (Las Vegas, Nevada) in collaboration with the Clark County Local Systemic Change Initiative, Mathematics and Science Education
- Arizona Rural Systemic Initiative, based at the Indian Affairs Program at East Stark County Mathematics and Science Partnership, Canton, Ohio
- Education Development Center's K-12 Science Curriculum Dissemination Center

track students, further widening the opportunity-to-learn gap. Avoiding data-based disasters is not a technical matter. It is an ethical matter that begins with passion and determination.

What ignites the Using Data Process is the appetite, choice, and determination to serve every child as if he or she were our own; a mindfulness of the awesome influence we have in the children's lives that we touch; and a commitment to use that influence to produce the best possible results for every one of them. Our first driving purpose for this book is to contribute to dramatic and permanent improvement in the way schools go about their business so that they make that level of positive difference in students' lives. Our second purpose is to strengthen your resolve and the resolve of others whom you work with to do whatever it takes to educate every child to the peak of his or her capacities.

Our third purpose is to “get technical”—to build skills and knowledge about how to lead a process of collaborative inquiry with school-based data teams. In the last few years,



educators have been called upon to do work they have never done before and were, in most cases, never prepared to do, including apply principles of cultural proficiency to school improvement; understand and draw sound inferences from data; accurately identify root causes of problems that the data surface; and so much more. This book addresses that capacity crisis by providing you with detailed, technical guidance in how to use data to engage in systematic and continuous improvement.

Behind the Book: Our Assumptions

The Using Data Process places a major emphasis on surfacing and engaging in dialogue assumptions. Therefore, any discussion of the book would not be complete without a clarification of the assumptions we held as we developed the entire process. We hope Data Coaches will use these assumptions as catalysts to clarify their thinking and to create dialogue with their teams.

ASSUMPTION 1: *Making significant progress in improving student learning and closing achievement gaps is a moral responsibility and a real possibility in a relatively short amount of time—two to five years. It is not children’s poverty or race or ethnic background that stands in the way of achievement; it is school practices and policies and the beliefs that underlie them that pose the biggest obstacles.*

Federal and state policies will come and go, but as Michael Fullan² reminds us, “You can’t mandate what matters.” What matters is educators’ deep responsibility for the learning of every child. This assumption implies a shift from a compliance mentality—a sense of external accountability, something someone is making us do—to a sense of internal and collective responsibility. We believe that it is impossible to use data as a lever for change without talking about race, class, and culture and our beliefs about the

capabilities of children. The possibility to dramatically improve the learning of traditionally underserved students has been demonstrated time and again. It is the silence about these issues that has kept us from confronting problems and taking action.

ASSUMPTION 2: *Data have no meaning. Meaning is imposed through interpretation. Frames of reference—the way we see the world—influence the meaning we derive from data. Effective data users become aware of and critically examine their frames of reference and assumptions.³ Conversely, data themselves can also be catalysts for questioning assumptions and changing practices based on new ways of thinking.*

If one holds the view that whether or not students learn is the student’s responsibility and not that of the teacher, one might then look at a student’s poor performance on assessments and conclude that it is entirely the student’s fault and that there is nothing to be done to improve teaching. For example, if one believes that African American students are not as capable as white students, then data that reveal an achievement gap between these groups do nothing but confirm that belief. The reaction is complacency or resignation. On the other hand, when one is open to critically examining assumptions, data can be a catalyst to discard old frames of reference and embrace new ones.

ASSUMPTION 3: *Collaborative inquiry—a process where teachers construct their understanding of student-learning problems and invent and test out solutions together through rigorous and frequent use of data and reflective dialogue—unleashes the resourcefulness and creativity to continuously improve instruction and student learning.*

“The staff at Wendell Williams phoned yesterday screaming. They received their CRT results...all scores, all grade levels, and all subjects went UP!”

— FLORENCE BARKER, PRINCIPAL AND DATA COACH, CARTWRIGHT ELEMENTARY SCHOOL,
CLARK COUNTY SCHOOL DISTRICT, NEVADA



Teachers possess tremendous knowledge, skill, and experience. Collaborative inquiry creates a structure for them to share that expertise with each other, to discover what they are doing that is working and do more of it, and to confront what isn't working and change it. When teachers generate their own questions, engage in dialogue, and make sense of data, they develop a much deeper understanding of what is going on relative to student learning. They develop ownership of the problems that surface, seek out research and information on best practices, and adopt or invent and implement the solutions they generate.

ASSUMPTION 4: *A school culture characterized by collective responsibility for student learning, commitment to equity, and trust is the foundation for collaborative inquiry. In the absence of such a culture, schools may be unable to respond effectively to the data they have.*

Long before state tests, plenty of data were available to let us know some students were not learning—students going through day after day of school without being engaged, poor grades, poor attendance, and high dropout rates. However, in the absence of a collaborative culture where everyone takes responsibility and is committed to improving student learning, educators literally could not respond to the data. In schools that do have this “responsibility,” responsibility for student learning is enacted as part of the daily work of teachers. A hallmark of such high-performing cultures is a commitment to equity, which requires a high level of trust. Educators must trust each other enough to discuss “undiscussables” such as race, reveal their own practice and mistakes, root for one another, and face together the brutal facts that data often reveal.⁴

ASSUMPTION 5: *Using data itself does not improve teaching. Improved teaching comes about when teachers implement sound teaching practices grounded in cultural proficiency—*

understanding of and respect for their students' cultures—and a thorough understanding of the subject matter and how to teach it, including understanding student thinking and ways of making content accessible to all students.

It is easy to get swept away in the data-driven mania provoked by federal and state education accountability policies, where data can sometimes seem to be an end in themselves. But test results, lists of “failing” schools, bar graphs, tables, proficiency levels, even student work, do nothing by themselves to improve teaching unless they spark powerful dialogue and changes in practice. The data are just the tip of the iceberg, alerting us to problem areas and reminding us that what lies beneath is what counts—the curriculum, instruction, assessment, and professional development practices that will improve student learning. Data use is not a substitute for the hard work of improving instruction.

ASSUMPTION 6: *Every member of a collaborative school community can act as a leader, dramatically impacting the quality of relationships, the school culture, and student learning.*

Marzano, Waters, & McNulty⁵ identified 21 leadership behaviors correlated with student academic achievement. Virtually all of these 21 responsibilities, which include celebrating accomplishments, challenging the status quo, fostering shared beliefs and community, staying focused on goals, and communicating ideas and beliefs, are functions of Data Coaches and data team members as well as of school and district administrators. Data use is no longer a specialty of the assessment or central office or the principal. Everyone in the school can and should understand and use data in ways that contribute to instructional improvement.



“When our middle school mathematics data team received their most recent state achievement test results, they broke into cheers and tears. That’s ownership!”

— PAM BERNABEI-RORRER, MATHEMATICS AND DATA COACH, CANTON CITY, OHIO

A DATA COACH'S GUIDE AND THE USING DATA WORKSHOPS

Show You How To:

- Design, implement, and sustain a district-wide (or project-wide) program of continuous improvement in diverse settings.
- Prepare Data Coaches to lead data teams in collaborative inquiry and high-capacity uses of data.
- Keep the focus on equity and closing achievement gaps.
- Increase the power, focus, and effectiveness of professional communities.
- Use data as a catalyst to powerful conversations about race/ethnicity, class, educational status, gender, and language differences.
- Get staff excited about using data regularly and collaboratively.
- Apply robust tools for making sense of data.
- Connect data use to instructional improvement and learning results.

Inside the Guide

A Data Coach's Guide is both a guidebook and a CD-ROM toolkit that provides step-by-step notes and tested tools for setting up and leading your data team. Inside the book you will find Task-at-a-Glance tables; background information; directions for materials and data preparation; detailed step-by-step procedures; illustrative data; and real-life examples of data teams in action.

The first two chapters help you lay the necessary groundwork for successfully implementing the Using Data Process. They explain the collaborative inquiry process;

how to establish conditions for success; and how to prepare Data Coaches to engage with their teams. These chapters also discuss how to build understanding and support for the process among parents, school boards, faculty, and other members of your school community.

The heart of the book, Chapters 3 through 7, describe in detail how Data Coaches facilitate each of the five components of collaborative inquiry that are essential to the Using Data Process: building the foundation; identifying a student learning problem; verifying causes; generating solutions; and implementing, monitoring, and achieving results. These chapters present a sequence of 19 tasks for Data Coaches to carry out with their teams. For example, tasks in Chapter 4, Identifying a Student-Learning Problem, focus on drilling down into state CRT [criterion-reference test] data, student work and local assessments; while in Chapter 6, Generating Solutions, the tasks include using a logic-model to identify best outcomes and creating plans to meet a specific student learning goal.

The final, inspirational chapter, Clark County, Nevada: Collaborative Inquiry In Action, shows you the whole process over three years in one district and school. With commentary from the Data Coach and Principal involved, you'll learn about the challenges the school faced and how they surmounted them.

A Data Coach's Guide also includes a CD-ROM with all the tools and materials you need to successfully implement the Using Data Process with your team. It contains Excel data templates, PowerPoint slides, sample agendas, protocols for engaging in data-driven or equity dialogues, group process tools for establishing roles, tools for analyzing data; forms for documenting your work; and much more. The materials are organized by chapter and task, making it simple to access the resources you need at every stage of the process.



Many School Contexts, Multiple Entry Points

Because every school context is different, we designed this book to be navigated in various ways depending on your needs. It is not necessary or even recommended to conduct every activity with every data team. Instead, customize the process by considering the knowledge, skills, beliefs, and experiences of your data team and the time and data available. We have included a variety of assessments of data literacy and school practices that will help you tailor your own approach to these materials. Use the book with your context in mind and find the best fit between your purpose and our product.

For example, a Data Coach who wants to follow the entire process might choose to go chapter by chapter, following what we have laid out in a comprehensive, sequential, and structured way. A reader who already has an established continuous-improvement process in place might strengthen that process by focusing on one or two components of collaborative inquiry and choosing chapters accordingly. Readers who want to see the whole picture before getting into the details of the process could start off by reading Chapter 8, the case study about Clark County, Nevada. Or, some readers may want to go directly to the Toolkit on the CD-ROM and scan for specific tools to use with their data teams or faculty. The Using Data Project also offers workshops based on the materials contained in the Guide for districts looking to implement the process on a large scale.

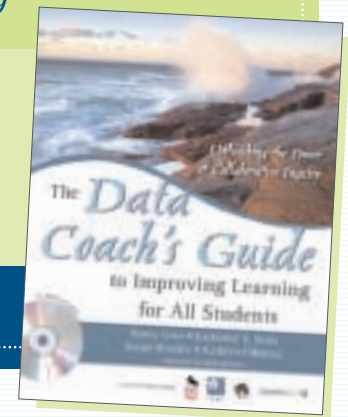
Whatever pathway you take, please use this guide to inspire your own creativity and to unleash the power of collaborative inquiry to make a better future for all of our children.

All photos courtesy of the Using Data Project archives.

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Nancy Love is Director of Program Development at Research for Better Teaching. Katherine Stiles, Susan Mundry, and Kathryn DiRanna are Project Directors at WestEd.

For more information about the Using Data Project at TERC, contact Diana Nunnaley, Using Data Project Director, diana_nunnaley@terc.edu. To learn how your school can benefit from TERC's Using Data Workshops, see page 2.