Research You Can Use

William E. Windler
Assistant Commissioner
Office of Special Services

Anita M. Foxworth, Ph.D., Editor

November 2003

A Note from the Editor:

On January 8, 2002, President Bush signed into law the No Child Left Behind Act of 2001. The Act was based on four basic principles: stronger accountability for results, increased flexibility and local control, expanded options for parents, and an emphasis on teaching methods that have been proven to work. The requirement to focus on what works represents the "federal government's most visible effort to shift practice in a different direction (Richardson, 2002)." This month's Research You Can Use offers both a definition of scientifically based research and a tool for use in the school improvement planning process. This edition was written by Greg Cameron who is on staff at McREL.

Making the Shift to Scientifically Research Based Practice

"…Any school in the United States can operate at advanced levels of effectiveness – if it is willing to implement what is known about effective schooling." Marzano, 2003

In the current setting of school reform, educators are expected to become critical consumers of educational research. For many educators, reading and using research to guide their practice is not a common occurrence. Therefore the expectation that educators will make the use of research the cornerstone of any reform or improvement effort can be challenging. This is especially true for those practitioners that have not integrated this process into their improvement efforts. The good news, however, is that the benefits of using research outweigh the additional efforts needed to gain this critical knowledge. The study of research is the best means of acquiring the information necessary to guide decision making and to examine the evidence that supports the effectiveness of particular strategies

or practices. Not only do teachers and students reap the benefits but we stand to improve the overall quality of our schools by creating professional learning cultures that focus on effective practices, improve and enhance teacher knowledge and skills to confidently provide student focused instruction, and improve our ability to meet the rigorous state and federal accountability requirements.

Identifying research-based Solutions for School Improvement: A Workshop, (2003) developed by the National Clearinghouse for Comprehensive School Reform, offers educators a practical approach to integrating the use of research into the school improvement process. The workshop lists three perspectives from which we can address the benefits of using research to improve schools. The following discussion of each of these three perspectives is meant to generate thinking among practitioners about how and why to begin looking at research as part of the ongoing process to create and sustain highly effective schools.

1.) The Accountability Perspective

A key component of No Child Left Behind (NCLB), which became law in January of 2002, is to ensure that children receive the benefits of instructional strategies and methods that are proven to be effective under the standard of scientifically based research. What exactly does Scientifically Based Research (SBR) mean? According to the Comprehensive School Reform Program Guidance NCLB defines SBR as a particular research design that, "emphasizes experimental and quasi-experimental studies that are systemic, empirical, well-designed, replicable, and have been accepted by independent reviewers" (2002, p.2). NCLB requires that any federally funded school, especially those schools identified as needing to improve,

use strategies or approaches that have been proven to be effective.

Searching for ways to improve student achievement is not new. However, accountability specifications now set the expectation that schools will ensure that **ALL** children achieve high levels of learning. These accountability specifications not only exist at the federal and state levels, but schools now have the added responsibility of being accountable to parents and their community. From an accountability perspective, it is imperative for educators to acquire the necessary knowledge needed to effectively use research in making critical decisions about the most appropriate means of educating their children.

2.) The School Improvement Perspective

" Making use of research at the earliest planning stages will help you to develop not only a better and deeper understanding of what needs to be improved in your school, but also how to meet these needs to improve student learning." (NCCSR Workshop p. 9).

In an effort to meet the academic needs of all children, and to close the achievement gaps between all groups of students, educators need to know what works. The practice of randomly selecting one program after another in the hope of perhaps finding something that actually helps students increase achievement, has never been effective. Instead, schools should begin studying available research to determine what works. Evidence of a strategy's effectiveness with a particular population in a particular context is especially relevant. By examining and using research, the probability of improving student achievement can be increased, especially at a school level. Predictability, defined as, "Being able to predict with greater confidence, whether the practice or

2

program that we think we want to implement will work is enhanced when researched-based decision making becomes a part of the school improvement planning process." (NCCSR Workshop p. 26)

The school improvement process is ongoing and focused on the ultimate goal of improving student learning. When teams of educators come together to engage in this planning process, it should be clear that the process of setting concrete goals for student achievement and selecting the curriculum and instructional strategies needed to reach these goals, should be driven by two aspects. To gain a clear understanding of the current needs of the school, educators should first collect and analyze multiple forms of school data. Second, schools should review the research around the strategies being considered.

In What Works In Schools, Translating Research into Action (2003), Marzano states, "Thirty-five years of research provides remarkably clear guidance as to the steps schools can take to be highly effective in enhancing student achievement." (Marzano, 2003, p. 11). Using research as a corner stone of the school improvement decision-making process can enhance the confidence educators have that the strategies they select will make a difference for students in their school.

The following step-by-step process (adapted from "Scientifically based research and the Comprehensive School Reform," CSR Program Guidance, August 2002) illustrates when and how to utilize scientifically based research in the school improvement planning process.

Step One:	Schools collect data that gives a complete and accurate picture of the current state of the school.
Step Two:	School community analyzes data to determine and prioritize needs.
Step Three:	After prioritizing needs, schools write goal statements to address prioritized needs.
Step Four:	Schools develop potential strategies to achieve stated goals.
Step Five:	Schools begin topical literature review, identifying research base of potential strategies.
Step Six:	Schools use abstracts to determine if the research addresses (1) the theoretical basis of a program or practice, and/or (2) issues of implementation, replicability, and relevance, or (3) evidence of the effects of that program or practice on student achievement. Not all research addresses all three topics, but more than one may be addressed in an individual research study.
Step Seven:	If an examination of the abstract indicates that a study is relevant to the identified needs of the school, the study should be examined in more detail.
Step Eight:	Schools determine if the examined research is of high quality, replicable, and relevant. The examined research might meet the criteria of scientifically based research, the "strong evidence" criteria, or be at some other point along the spectrum of "evidence based." In some cases there will be no, or little, high quality evidence that this practice, program or model will increase positive outcomes for students.

3.) *The Professional Perspective*

"...research carried out in a more rigorous method can add an additional and important layer of professionalism to our daily work that can affect positive change in the classroom and improve student outcomes."(NCCSR Workshop p. 26)

In Classroom Instruction That Works, Marzano et al. (2001) writes, "We educators stand at a special point in time. This is not because a new decade, century, and millennium have begun (although this phenomenon certainly brings new opportunities and complexities.) Rather, it is because the "art" of teaching is rapidly becoming the "science" of teaching, and this is a relatively new phenomenon" (p.1). This change to the "science" of teaching is about using research in learning, dialoging, and determining which educational programs, instructional strategies, and specific action steps lead to more effective schools and higher student achievement.

Educators coming together to read, study, discuss, and make decisions around educational research can be an empowering experience. In Professional Learning Communities at Work, (1998) DuFour and Eaker identify collective inquiry as a key characteristic of professional learning communities. They state that,

"The engine of improvement, growth, and renewal in a professional learning community is collective inquiry. People in such a community are relentless in questioning the status quo, seeking new methods, testing those methods, and then reflecting on results. Not only do they have an acute sense of curiosity and openness to

new possibilities, they also recognize that the process of searching for answers is more important than having one."

Furthermore, their search is a collective one" (p.26). This collective search for answers that is so essential in building a professional learning community is the perfect place to focus on research. Asking questions about continuous improvement and the methods that work can often be answered by the systematic and ongoing use of research. Looking at research collectively can foster both meaningful dialogue and collaboration. A few strategies school can use to make reading, discussing, and using research an ongoing part of the school culture include study groups, teaching teams, and a critical friends approach.

Study Groups can be set up around specific needs or goals. Study group members can individually and collaboratively collect research abstracts, summarize findings for the group, and engage in meaningful discussions about the implications of the research for a specific school.

Teaching Teams that share content areas or grade levels can incorporate looking at research by identifying needs and goals specific to their areas and levels. These teams might use part of their team planning time to keep up to date with research that is particular to their content areas and the needs of their current students.

Critical Friends groups can look at student work that resulted from implementing researched based strategies. Ongoing discussion about how researched

based strategies, that have been agreed upon in the school improvement plan, are impacting student achievement and teacher practice can focus educator's beliefs and practices. Sharing the daily work of teaching and learning is essential to organizational learning and the overall evaluation of how relevant the selected strategies are to a specific school.

The professional perspective also includes the use of professional judgment.

"...school leaders will need to rely on the best available empirical evidence and some degree of professional judgment in creating their programs" (CSR Program Guidance, August 2002).

Nobody knows a school's specific context better than the educators in that school. Educators need to be critical consumers of research, using evidence from research and their knowledge of their own school, in order to determine whether the strategies or programs being considered will prove to be relevant and effective in their school.

Conclusion

Using research as part of the ongoing work of professional educators will have benefits from at least three perspectives. From an *accountability perspective,* implementing research based strategies and action steps can lead to the student achievement gains needed for schools to avoid sanctions and fulfill their responsibility to educate all children. Taking on the responsibility to educate all children translates into a collective and continuous focus on what will work in our schools. Research should provide us with focus.

From the school *improvement perspective*, integrating research into the process of selecting strategies and interventions means that the actions that are chosen will have a real opportunity to make a difference in the achievement for students. The success of school improvement efforts begins with identifying the needs of a school and then determining what strategies and action steps need to be taken to meet those needs. It is essential that in determining which strategies and actions to take, educators take a long and serious look at the available research. The systemic and systematic use of research will help educators make decisions that will increase school effectiveness and student achievement.

From a *professional perspective*, a focus on research can lead to meaningful dialogue, collaboration, and learning among educators. Increased knowledge and enhanced skills among educators can lead us to our ultimate goal of improving student achievement.

References

Comprehensive School Reform Program Office. (2002). *Scientifically based research and the Comprehensive School Reform (CSR) Program.* Office of Elementary and Secondary Education, U. S. Department of Education.

DuFour, R. & Eaker, R. (1998). Professional Learning Communities at Work, Best Practices for Enhancing Student Achievement. Alexandria, VA: Association for Supervision and Curriculum Development.

Marzano, R. (2003). What Works In Schools, Translating Research Into Action. Alexandria, VA: Association for Supervision and Curriculum Development

Marzano, R., Pickering, D. & Pollock, J. (2001). Classroom Instruction that Works. Alexandria, VA: Association for Supervision and Curriculum Development

Richardson, J. (2002). The science of learning choices. *Results* Available: http://www.nsdc.org

The National Clearinghouse for Comprehensive School Reform. (2002) *Identifying Research-Based Solutions for School improvement: A Workshop.* Author

Web Connections

Mid-continent research for Education and Learning: www.mcrel.org

The National Clearinghouse for Comprehensive School Reform: www.goodschools.gwu.edu

Scientifically based research and the Comprehensive School reform (CSR) Program.
Comprehensive School reform Program Office
www.ed.gov/programs/compreform/guidance/appendc.doc