Research To Practice FAQs: Meeting The Needs For Access

The FAQs briefly define research to practice and address issues that arise in implementing, scaling up, sustaining, and evaluating programs and practices that have proven to be effective in improving outcomes for children. Research-based programs, practices and strategies are based on rigorous, systematic, and objective procedures and have demonstrated improved outcomes for the particular intervention.

The purpose of the FAQs is to help educators, parents, and community members make informed decisions about the appropriateness of research-based instructional programs and practices that would enhance the access of students with disabilities to the general education curriculum. The FAQs provide background information and discuss the four major issues that need to be addressed in moving research to practice: implementing, scaling up, sustaining, and evaluating research-proven programs in the learning environment. These FAQs also provide information related to effective professional development, a key element supporting all phases of connecting research to practice.

Q. What does research to practice mean?

A. Research to practice means implementing research-based instructional and assessment practices that are supported by rigorous evidence. The purpose is to advance the quality of education, make teaching more effective and efficient, and thus enhance learning outcomes for all students.

Q. How does the U.S. Department of Education define scientifically based research?

A. The No Child Left Behind (NCLB) Act (2001) defines programs validated through scientifically based research as involving the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education programs.

Scientifically based research includes research that

- Is rigorous and systematic (i.e., carried out in a way that is consistent, disciplined, and methodical)
- Is objective (i.e., free from the influence of subjective judgments)
- Is empirical (i.e., grounded in data and not based on opinion and speculation
- Has a strong research design, following an experimental or quasi-experimental design. Study subjects would be divided into at least two groups (one group using the practice or program and the other not using it) based on careful random assignment or by equating students' background characteristics.
- Has reliable data (i.e., data measured consistently using strong measures)
- Has valid data (i.e., accurate data that measures what it was intended to measure).
- Involves rigorous data analyses (i.e., researchers analyze the data using methods that are appropriate to the task)
- Has been accepted by a rigorous peer-review or approved by a panel of independent experts that apply strict standards of scholarship to the work they review

See No Child Left Behind Act of 2001, Pub. L. No. 107-110,Sec.9109 (37). (2002)
See Identifying and Implementing Educational Practices Supported by Rigorous Evidence: A User-Friendly Guide. http://www.ed.gov/rschstat/research/pubs/rigorousevid/guide_pg3.html

Q? How does research to practice relate to access to the general education curriculum for students with disabilities?

A. There are no "cookie-cutter" programs or strategies that work for all students with disabilities. More research needs to be conducted that uses the "gold-standard" of scientific rigor. In addition more careful review of existing research needs to occur in order to evaluate and synthesize evidence relating to programs and practices. In the meantime, a body of research does suggest that specific programs and practices are effective with particular students. Increasing exposure to such research-supported instructional methods and practices, materials and media, and supports and accommodations will help students with disabilities effectively engage in learning general education curriculum content. Using empirically supported practices will help these students meet high educational standards and achieve their instructional goals because objective statistical evidence indicates that these interventions do result in positive student gains. For example, mnemonics, a research-supported instructional strategy designed to enhance recall of factual information, vocabulary, or key concepts, helps students with mild disabilities engage in instructional content and learn the general education curriculum. A research-supported strategies chart and other briefs can be found on the Access Center website at www.k8accesscenter.org

No Child Left Behind requires states to adopt and implement challenging academic content standards and student academic-achievement standards. Such standards apply to all students, including those with disabilities. It is important to recognize the link between NCLB and the Individuals with Disabilities Education Act (IDEA) of 1997. For example, under both IDEA '97 and NCLB, states must implement yearly academic assessments to measure student achievement and provide for appropriate accommodations for students with disabilities, as defined by IDEA.

Q? How can we learn about research-based practices that will enhance and sustain access to the general education curriculum?

A. Practices, programs, and strategies with the strongest evidence base will have (1) high quality studies and (2) high quantity of studies that provide support. One way to learn about current research is to read rigorous studies in journal articles, papers, and books. University researchers and professionals working in research organizations conduct the majority of the rigorous research studies; however; other individuals and organizations throughout the country also conduct direct research. Piecing together findings from a number of studies can be time-consuming. Another way to learn about research findings is to review syntheses of research from organizations and professionals that examine the latest empirical research in the field and collect and synthesize research-based practices. When relying on others' review of research, educators need to be sure that the reviews have been conducted with the level of rigor that is needed for their purposes.

Educators who want to identify research-based practices applicable to their settings should carefully examine information about research by asking the following questions:

- Who funded the organization's syntheses or research?
- Who collected and analyzed the data?
- When (how current are the syntheses) and for what purpose was this work conducted?
- How do the findings and syntheses apply to our work to improve access to the general education curriculum for students with disabilities?
- What is the validity of the findings?

- Were the program and outcome properly defined?
- Was the program the cause of the change in the outcome?
- Was the program tested on relevant participants (for example, students with disabilities)
- Do the findings accurately demonstrate the effect size between the subgroups involved in the program? For more information on effect size, visit http://cem.dur.ac.uk/ebeuk/research/effectsice/intro.htm

The following resources are a good starting point for identifying research-based practices:

- **The Access Center: Improving Outcomes for All Students K-8** maintains a knowledge bank of information about research-based practice, and can connect educators to other sources and materials. For more information, visit The Center's website at www.k8accesscenter.org.

- The **What Works Clearinghouse (WWC)** was established in 2002 by the U.S. Department of Education's Institute of Education Sciences to provide educators, policy makers, and the public with a central, independent, and trusted source of scientific evidence of what works in education. WWC is administered by the U.S. Department of Education through a contract to a joint venture of the American Institutes for Research and the Campbell Corporation. The WWC developed standards for reviewing and synthesizing educational research and will provide its findings in accessible, user-friendly, searchable online databases. Visit http://www.w-w-c.org/about.html to learn more about WWC.

- Divisions of the **Council for Exceptional Children (CEC),** such as the Division on Learning Disabilities (DLD) and the Division on Research (DR) develop syntheses of research-based practices in current practice alerts. These alerts can be found at http://www.teachingld.org/ld_resources/default.htm.

- Other professional associations, such as the **American Education Research Association (AERA),** through their refereed journals, provide periodic reviews of research-based practices. Some of their publications also report about specific studies that provide a synthesis of research. Visit www.aera.net to learn more about the work that AERA has conducted to identify and report research-based practices.

- **Ten regionally based educational laboratories** funded by the U.S. Department of Education's Institute for Education Sciences conduct and develop applied research that results in models for systematic school reform at the state and local levels. For example, the Northwest Regional Educational Laboratory and the National Clearinghouse for Comprehensive School Reform prepared *The Catalogue of School Reform Models,* which provides descriptive information on 26 whole-school models and entries on reading/language arts. Visit the lab network at http://www.relnetwork.org/about.html.

Q? How do we know if the research and its findings are applicable to our school or district?

A. Deciding which research-based programs and strategies are appropriate to your school setting requires an understanding of the programs and critical issues they are designed to address. However, although a program has been demonstrated to work in for one student population, school, or community, that same program may not be right for your student population, school, and community. As you assess applicability of a program or strategy, think about the following questions:

- Does it address our target population(s)?
- Does it meet our needs and goals?
- Does it provide outcome data for students with disabilities who are similar to the students in our school?
- Are the situations in which it worked similar to ours?
- Are the resources required appropriate to our needs and goals?
- What are the implications for our staff in terms of time, resources, or professional development?
- Do we have the organizational resources (staff, budget, space, time) for effective implementation?
- Is it aligned with our general curriculum? Is it compatible with state, local, and school policies and procedures?
- Is there external support that can help us implement the program or strategies (e.g., technical assistance centers, program developers, and district or regional staff)

Several school and community members must engage in these discussions. Organizing a program-adoption committee with general and special education teachers, administrators, parents, and paraprofessionals provides an opportunity to learn from multiple perspectives.

Q? What if we find that a research-based practice or program appears applicable to our needs, but we do not have the appropriate resources to implement the program? Or what if the program was designed and implemented with populations in settings different from ours?

A. If you cannot find a research-based practice, program or strategy that matches your available resources, consider increasing your school's organizational capacity to implement the program or practice. In this case, capacity refers to the capability needed to implement a particular program or practice. Research on education capacity often refers to five types of capacity needed to implement a program:

- Intellectual capacity—the knowledge and skills needed to implement a program
- Physical capacity—the physical space, materials, and technology needed for implementation
- Fiscal capacity—the financial resources needed to acquire or develop other aspects of capacity
- Social capacity—the quality of interpersonal relations and trust needed among the professional staff, students, and parents to support implementation
- Cultural capacity—the degree to which your district, school, or other units have shared goals and values for student learning. For example, is there agreement on the knowledge, skills, and attributes all students should attain or the attributes for students with varying types of disabilities? Are these attributes aligned with the new program being considered?

If the program has mostly been implemented in settings different than your own, you should carefully examine how they are different. You should also find out whether or not there are results in settings similar to your own.

If you are unable to increase capacity or if the settings are somewhat different, you may also consider adapting the program to meet your own needs and circumstances in a way that *does not alter its most essential features*. When working with students with disabilities, adaptations to programs or curriculum do not change the program's content; they change the conceptual level for the standard the student is expected to learn. Similarly, for students with disabilities, accommodations do not change the content or curriculum; they change the input or output method used by the teacher or student. Your priority should always be, however, to replicate with fidelity a program that has proven effective through rigorous evaluation.

Q? If our review shows the research- based program is applicable, how do we plan for implementing a new program or practice?

A. Various settings will have different ways of responding that work best for them; one of the best strategies is to develop a strategic plan for implementing new programs or practices. This strategic plan could be developed by a planning committee that would include the major stakeholders who could influence implementation. Members of the planning committee may include administrators, counselors, general education teachers, special education teachers, resource teachers, paraprofessionals, and parents. Among the responsibilities of the committee is to identify who in your setting will be responsible for the following:

- Articulating how the program will enhance student access to the general curriculum
- Acquiring the resources needed—personnel (e.g., general education teachers, special education teachers, paraprofessionals, volunteers, parents), fiscal, time
- Ensuring that administrative policies, such as release time, incentives, support for co-teaching, are in place
- Setting goals and measurable objectives for students with disabilities
- Designating roles and responsibilities for implementing the program or practices and the time frames in which this will occur
- Fostering collaboration between general education and special education teachers
- Establishing appropriate linkages with the research community and program developers
- Designing and providing professional development
- Determining when and how the results of your actions will be assessed and evaluated
- Determining how outcomes will be reported to stakeholders

Q? Where can we seek technical assistance to facilitate moving research to practice?

A. Several technical assistance (TA) providers can help you in the implementation process. Before selecting a TA provider, try to learn about its sources of funding, qualifications and experience, and the types of work the provider has conducted with consumers who have similar needs as yours. Consider the following resources for external support and guidance.

- The U.S. Department of Education, Office of Special Education Programs (OSEP), funds the federal **Special Education Technical Assistance and Dissemination Network (TA&D);** http://www.ed.gov/offices/OSERS/OSEP/Resources/link contains a listing of federally supported centers and projects. The TA&D Network includes the Access Center **(**www.k8accesscenter.org**)** funded by OSEP to provide assistance to state and local educators, families, and policy makers on access to the general education curriculum.

- The U.S. Department of Education, Office of Special Education Programs, funds six **Regional Resource Centers (RRCs)** that assist state education agencies systemically improve education programs, practices, and policies for children and youth with disabilities. Many of these centers will either provide direct TA to local education professionals or refer consumers to more appropriate TA providers. For more information, visit http://www.dssc.org/frc/.

- Many states have intermediate units or state education agencies that provide professional development and technical assistance to educators within the state. Your state department of education website will provide information about **state-based TA systems.** Another resource is the Association of Educational Service Agencies, the national professional association to which 37 state TA systems belong. Learn more about their services at www.aaesa.org.

- National and state **professional associations**, such as the units affiliated with the Council for Exceptional Children (CEC), may be available to provide TA services to educators across its state. Check with your state CEC unit, which you can access via the national CEC site at www.cec.sped.org, to learn whether direct TA services are available in your state.

- The **Council of Chief State School Officers (CCSSO)** is a national professional association whose members are state personnel. CCSSO, through its programs and initiatives, offers technical assistance to its constituency and develops reference materials that can be used by all educators. For instance, CCSSO is implementing, with the support of the National Association of State Directors of Special Education (www.nasdse.org), a policy partnership program to which local education personnel may have opportunities to participate. A similar program through which learning communities are established is in place between the Access Center and CCSSO. Although many of the Association's projects are targeted to state administrators, check the organization's national website, at www.ccsso.org or contact staff within the superintendent's office of your state to learn about any CCSSO programs that may be appropriate for your circumstances.

- Many departments of education at **teachers colleges and universities** may provide TA services. University personnel often welcome the opportunity to work directly with local educators and frequently have consulting days available that will support their time to conduct TA activities. Some universities have fully developed TA programs established to assist educators on particular issues. You can either contact these professionals directly or work through organizations, such as the Access Center, that can connect you to available university-based resources.

- **Developers and product producers** may offer technical assistance to those professionals who purchase their program. Check with the developer for any new TA services that may be available. Ascertain whether additional costs are associated with these services and what types of TA services are available.

Q? What are some budget line items we need to consider in planning to implement a new program or practice?

A. Include budget line items such as materials, staff time, professional development, incentives, release time/substitutes, travel, consultants, and evaluation costs.

Q? Once we have a plan, how can we start putting the program into practice?

A. Before you begin implementing a new program, consider visiting a school using this program to help you understand how it operates. Talk to the teachers and administrators to learn about how they initiated the program, what challenges they may have encountered, and how they addressed those challenges. In addition, when you begin to implement, you may want to consider starting on a small scale.

Q? What are some of the issues we should consider in trying to bring a program or practice to scale?

A. While many children with disabilities have benefited from the accomplishments of successful teachers, schools, and programs, replicating this success on a larger scale has proven to be a difficult challenge. Much literature states that change efforts are most successful when the following exist:

- A school wide vision and school climate conducive to learning
- Enthusiastic and knowledgeable teachers

- High-quality curricula and instructional strategies
- A high level of engagement and involvement of multiple stakeholders
- Relevant, ongoing professional development
- Support from key stakeholders—students, parents, teachers, and administrators

Developing a process to successfully replicate a new program or practice on a large scale is important. As part of that process, reforms that claim to change practice should explain the underlying theory about how teachers learn to teach, and individuals responsible for implementing the program should be aware of this theory.

Q? Once a program is implemented on a large scale, what issues should we consider in trying to sustain it over time?

A. While the body of knowledge on sustainability continues to grow, you need to consider several critical issues, including the following:

- Teacher motivation and beliefs
- The degree to which practitioners can be creative and build their own vision into the program as implemented
- The extent to which the program can be adapted to changing circumstances and demands on schools
- The level of continuing support provided by important stakeholders
- The degree to which practitioners responsible for implementation have fundamentally changed (not just learned the basic skills needed for implementation) their *conception* of how to do whatever tasks are involved, such as their conception of teaching and learning

A program is sustained when the community embraces the program's guiding principles and continues to allocate internal resources even after explicit external resources are withdrawn.

Q? What type of professional development will we need to implement the program effectively?

A. Professional development is a key component in translating research into practice at all levels: initial implementation, going to scale, and sustaining change. Regardless of how much empirical research exists that justifies your selection of a particular education program or practice, it will not be successful if staff lack the knowledge or skills to implement the program. The format of professional development may vary depending on staff needs, resources, and time. Generally new information is introduced through a workshop or seminar and then may be followed up by study circles, round table discussions, inquiry research, observations, or peer coaching, all of which are embedded within the daily lives of teachers. Consider the following when planning for professional development:

- Provide theory to support the practice. For example, what is the theory behind access to the general education curriculum and how does this program relate to access?
- Show how the program is integrated into classroom practice to enhance access to the general curriculum.
- Make certain the professional development includes all staff that will be involved with the program; access is not only for special education teachers. Depending on the program and student placement, professional development may involve general education teachers, paraprofessionals, library staff, parents, and volunteers. Administrators also need to know about the program to support classroom practices.
- Provide concrete examples for how the program is working. For example, invite teachers from a school that has implemented the program to talk about their experiences in using the program.

- Provide opportunities for practice (application) and feedback. At a workshop, this may occur via case studies, but application can occur through other professional development approaches that are embedded in the teaching environment.
- Set up ongoing support mechanisms. Study circles, inquiry research, observations, collaborative teams, learning communities, or peer coaching reinforce learning and provide opportunities for ongoing assistance. This step is essential. All staff and volunteers require ongoing support.

Q? How do we know if the program or practice is helping students with disabilities learn the general education curriculum content and skills?

A. One of the cornerstones of the No Child Left Behind legislation and IDEA '97 is accountability. Even if you are implementing a program with empirical evidence of effectiveness, you will need to collect data periodically (and if possible data before the program is implemented for your baseline information) to evaluate the impact the program is having on your students and school. Measure the outcomes of the program against your goals and objectives for students with disabilities as outlined by your planning committee. Your outcomes should be as follows:

- Specific: What are the specific changes expected (e.g., 70 percent of the students with reading disabilities will go up two levels in reading)?
- Measurable: How will the changes be quantified or measured (e.g., performance assessment, achievement test)?
- Action-Oriented: How does the program or practice result in positive change for students (e.g., fourth grade students with mild disabilities will demonstrate an increase in vocabulary after teachers incorporate mnemonic strategies in the instructional process)?
- Realistic: Is the outcome consistent with what you expected as a result of implementing the program or practice with the target audience (e.g., related to the student's developmental level, time on task)?
- Timed: How long will it take for students to demonstrate change and how consistent is this with the time and resources available (account for both short- and long-term outcomes)?

Many schools are currently grappling with ways to assess outcomes for children with disabilities. You may want to measure changes via performance assessments, achievement tests, teacher-developed tests, or observations. Think about the instruments you can use to collect data and how often you will collect that data. The publication: *A Guide for Education Personnel: Evaluating a Program or Intervention,* on The Access Center website at http://k8accesscenter.org, provides an overview of the evaluation process and will help you get started in planning and implementing an effective evaluation tailored to your program. Other resources are available to guide you in collecting data at the local level. You may want to consider the following:

- **Using Curriculum Based Measurement (CBM) and Curriculum Based Assessment (CBA) data collection techniques**. To measure student progress in the general education curriculum, educators should use a variety of measures. Rather than relying solely on qualitative data (observation, interviews, etc.) or summative measures (performance assessment, standardized tests, etc.), CBM and CBA techniques provide an educator with formative data (student data collected along the process of educational delivery). For an overview of CBM visit the Access Center website at http://k8accesscenter.org

- **Speaking with your district data collection specialist and/or program evaluator**. State and local professionals responsible for data collection can be a wealth of information to help you identify and suggest ways of implementing data collection procedures. These professionals may belong to a committee affiliated with the Council of Chief State School Officers (www.ccsso.org) called the Education Information Advisory Committee (EIAC).

Members of EIAC monitor federal data-collection, evaluation, and assessment activities for quality; provide state and local education agencies with technical expertise; serve as a point of state consultation in the development of assessment, evaluation, and survey data collection programs; and represent chief state school officers in liaison functions between federal and state agencies. Visit EIAC to learn more about the potential services that your local EAIC representatives can provide. http://www.ccsso.org/eiac.html.

Enhancing and maintaining your knowledge about the field of data collection. Current literature and publications provide a rich opportunity to learn and keep up to date about research and practice in data collection. Education journals, websites, and Listservs affiliated with education organizations will help you maintain your knowledge base. One resource is the American Evaluation Association (AEA), a professional association of evaluators that sponsors conferences and provides publications and a newsletter for members on evaluation issues. Visit the AEA website at http://www.eval.org for more information. Become involved in a professional association as a forum to share experiences and exchange strategies.

For additional information on this or other topics, please contact The Access Center at accesscenter@air.org.

We also would like to draw on your expertise and experiences in providing access to the general education curriculum. Please share your experiences and success stories with the Access Center by sending them to the address or e-mail below.

We look forward to hearing from you.

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