

## CURRENT ISSUES AND FUTURE TRENDS

### EVIDENCE-BASED PRACTICE: EASIER SAID THAN DONE

*Should science guide practice in special education? Most individuals would say "Yes." However, the "devil is in the details." (Odom et al., 2005, p. 137)*

When Congress reauthorized IDEA in 2004, it made several changes in the law to align it with the No Child Left Behind Act (NCLB). One of the most significant changes was the stipulation that students with disabilities receive special education and related services "based on peer-reviewed research to the extent practical." Thus, Congress made a legal requirement of something many special educators had always strived to do: use the results of scientific research to ensure their students receive the highest quality instruction. It is unfortunate that a federal law is required to motivate all educators to use scientifically sound teaching practices with children whose learning is most dependent upon effective instruction. The reality, however, is that many students with disabilities have been the recipients of teaching methods that are misguided at best, and some students have been subjected to practices that research has shown repeatedly to be not only benignly ineffective but also harmful (Heward, 2003; Jacobson, Foxx, & Mulick, 2005a).

While the mandate to use evidence-based practices (EBP) may appear straightforward, it is not. Just some of the questions that the field needs to address are the following: What criteria should educators use to define EBPs? Who will apply those criteria to determine which practices teachers should use and which ones they should avoid? What are the most effective and efficient ways to disseminate information about EBPs to IEP teams and teachers? How can a teacher determine the validity and trustworthiness of an EBP for her students?

#### DEFINING EVIDENCE-BASED PRACTICE

No universal standards exist for defining an EBP, and the field of special education, and education in general, is working to develop criteria for determining the degree to which a practice should be considered research based. A fundamental issue is defining the type of research that should be accepted as evidence for a practice's effectiveness. The Department of Education's Institute for Education Sciences and What Works Clearinghouse have identified the **randomized experimental group design** (also called a *randomized control trial, RCT*) as the gold standard for research methodology to show evidence of an instructional technique's effectiveness. Although well-conducted RCTs provide strong experimental evidence, much of special education's research base over the

past 40 years has been produced with other research methodologies, most notably nonrandomized group designs, single-subject research, and correlational studies (Odom et al., 2005). More recently, information obtained from qualitative studies has provided conceptual frameworks and support for emerging practices that can be analyzed and evaluated further with experimental studies. Examples of quality indicators for special education research using each of these four methodologies can be found in Gersten et al. (2005, p. 152); Horner et al. (2005, p. 174); B. Thompson et al. (2005, p. 191); and Brantlinger, Jimenez, Klingner, Pugach, and Richardson (2005, p. 202), respectively.

Another issue to be resolved is who will determine what practices are designated as evidence based. Traditionally, peer-reviewed literature reviews and meta-analyses (a sophisticated statistical comparison and assessment of the results produced by a group of studies that evaluated the same practice) by scholars who have examined a given topic provide one source of expert opinion (e.g., Bellini & Akullian, 2007; Lewis, Hudson, Richter, & Johnson, 2004). It is not uncommon, however, that after reviewing the existing research for a given practice, one author concludes the evidence base to be very strong while another's assessment of the same set of studies yields a much lower rating (e.g., Kavale & Forness, 1995; McIntosh, Vaughn, & Zaragoza, 1991).

Professional organizations and nonprofit groups are also contributing to the discussion of EBPs. For example, the Council for Exceptional Children (CEC) (2006a) has proposed a process and criteria by which practices would be classified at three levels:

- *Research-based practice*: Recommended for special educators' repertoire.
- *Promising practice*: May be included in special educators' repertoire with clear caveats for following the developing literature.
- *Emerging practice*: Informative, but research base does not yet lead to recommended use.

CEC's Division for Research and Division for Learning Disabilities co-produces a periodic series of *Practice Alerts* (available at [www.TeachingLD.org](http://www.TeachingLD.org)) to inform teachers about practices at two levels of research support: "Go For It" for practices with significant amounts of consistent evidence, and "Use Caution" for practices with limited or mixed research evidence. Examples of practices that have received the "Go For It" designation are

using graphic organizers (Ellis & Howard, 2007), direct instruction (Tarver, 1999), classwide peer tutoring (Maheady, Harper, & Mallette, 2003); and teaching phonological awareness (Troia, 2004).

Lists of instructional programs and practices that have met the criteria considered by various government and nonprofit organizations sufficient to be identified as evidence based can be found at these websites:

National Center for Special Education Research  
<http://www.ed.gov/about/offices/list/ies/ncser/index.html>

- Center for Evidence-Based Practice: Young Children With Challenging Behavior <http://challengingbehavior.fmhi.usf.edu/resources.htm>
- NICHY Research to Practice Database <http://research.nichcy.org/search.asp>
- The Promising Practices Network [www.promisingpractices.net/](http://www.promisingpractices.net/)
- The Wing Institute <http://winginstitute.org/>
- What Works Clearinghouse [www.whatworks.ed.gov/](http://www.whatworks.ed.gov/)

## EVIDENCE-BASED USE OF EVIDENCE-BASED PRACTICES

No matter how much scientific evidence supports a given a curriculum, program, or teaching method, a teacher should never assume effectiveness (Detrich, Keyworth, & States, 2007). When implementing any EBP, teachers should:

- *Be consistent: Treatment fidelity is paramount.* The full and intended effects of any intervention will not be realized unless the procedure is implemented as designed. Researchers use the term “with complete fidelity” when evaluating a practice.
- *Beware of eclecticism.* It is tempting to think that a combination of practices will be more effective than any single practice. Eclecticism, however, is often a recipe for failure because (1) the most important and

effective parts of each model might be rejected in favor of weaker, ineffective components; (2) some components of a given practice may not be effective when implemented without other elements of the practice; (3) elements from different practices may be incompatible with one another; (4) an eclectic mix might prevent any of the included models from being implemented with sufficient duration and intensity to obtain significant effects; and (5) teachers who use elements of multiple practices may not learn to implement any of the methods with the precision necessary for optimal results (Heward, 2003).

- *Test it yourself.* The most important and generally useful EBP of all may be direct and frequent measurement of student progress.
- *If you must modify the program, change only one variable at a time.* Modification or variation may be necessary to obtain desired levels of learning for a given student. Begin by implementing the published procedure as consistently and rigorously as possible. Then, if data show insufficient progress, change one, but only one, aspect of the program while continuing to measure student performance.

## What Do You Think?

1. Why is use of EBPs a current issue in special education?
2. Identify and rank order five criteria you believe most important in determining whether an instructional program or teaching method should be designated an EBP.
3. Like television viewers who are barraged with a steady stream of commercials touting amazing results from one wonder drug after another, teachers are told by every publisher and in-service workshop presenter that the programs and methods they are pitching are “scientifically proven” to be effective. How can educators protect themselves against being taken in by false claims?

## LEAST RESTRICTIVE ENVIRONMENT

IDEA requires that every student with disabilities be educated in the **least restrictive environment (LRE)**. Specifically, the law stipulates that

to the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are not disabled, and special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability of a child is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily. (P.L. 108-446, Sec. 612 [a][5][A])

### Least restrictive environment



Council for  
Exceptional  
Children

Content  
Standards for  
Beginning

Teachers—General Curriculum and Independence Curriculum Referenced Standards: Principles of normalization and concept of least restrictive environment (GC1K8, IC1K7).