

Introduction to Evidence-Based Practice

New legislation, the media, and our schools increasingly refer to evidence-based practices and research-based interventions. What, however, classifies something as evidence or research based, and why is it important to education? This Fast Facts addresses what evidence based practices are, why they are critical in education, and how educators and practitioners can determine if the practices they are using meet this high standard.

What and Why?

Two of the most significant federal education policies, the NCLB Act of 2001 and the Individuals with Disabilities Education Act (IDEA) of 2004, require the use of evidence based practices in the schools to improve learning outcomes for all students. For example, NCLB has a heavy emphasis on utilizing instructional procedures, interventions, and curricula that have been demonstrated as effective by *scientifically based research*. Furthermore, IDEA requires that Individualized Education Plans (IEPs) recommend services supported by *scientifically-based research*, and that failure to respond to *scientific research based interventions* may be a criterion for identifying a specific learning disability.

NCLB defines scientifically-based research as "...research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs." Therefore, Evidence-Based Practice (EBP) is the use of practices, interventions, and treatments which have been proven, through scientifically based research, to be effective in improving outcomes for individuals when the practice is implemented with fidelity.

Both because of the legislated requirement, as well as a desire to utilize best practices in their work,

educators and school based providers must be well versed in how to evaluate the research base and level of evidence of programs they are considering implementing.

EBP Standards

In general, the gold standard for determining evidence based practice requires a strict experimental approach with random assignment of participants to treatment groups and publication in peer reviewed journals. However, not all programs and practices can be reasonably subjected to this type of rigor, particularly when such programs are created and implemented in education systems with children and other protected populations. As such, registries which examine and rank mental health and educational interventions typically do so in a graduated fashion, acknowledging that different types of evidence may be adequate for supporting the implementation of a program.

For example, the Office of Juvenile Justice and Delinquency Prevention's Model Program guide ranks programs as *Exemplary*, *Effective*, or *Promising* based upon four summary dimensions of program effectiveness: (1) conceptual framework, (2) program fidelity, (3) evaluation design and (4) empirical evidence. In this system, a program that is rated as *Exemplary* will have a stronger evidence base than one that is rated *Promising*.

Many registries of evidence-based practices exist to assist practitioners in the selection of appropriate interventions for their needs. Some of these include the What Works Clearinghouse, NREPP, the Promising Practices Network, and the Best Evidence Encyclopedia. Links to these registries are provided at the end of this fact sheet. For programs not listed in these registries, a checklist to determine the adequacy of an evidence-base is provided below.

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Checklist for Evidence-Based Practice Determination*

1. Has at least one randomized clinical trial shown this practice to be effective?
2. Has the practice demonstrated effectiveness in several replicated research studies using different samples, at least one of which is comparable to the treatment population of your region and/or agency?
3. Does the practice demonstrate positive, significant effects on intended outcomes?
4. Can the practice be logistically applied to your region/agency?
5. Is the practice feasible: can it be used in different formats, is it attractive, is it cost-effective, and is training available?
6. Is there sufficient information, including details and a manual, for the practice? Are key components clearly laid out?
7. Is the practice well accepted by providers and clients?
8. Is the practice based on clear and well-articulated theory?
9. Does the practice have associated methods of ensuring fidelity (consistency of delivery of treatment/intervention over time)?
10. Can the practice be evaluated?
11. Does the practice show good retention rates?
12. Does the practice address cultural diversity and different populations?
13. Can the practice be used by staff with a wide diversity of backgrounds and training?

*(adapted from Iowa Consortium, 2003)

For a more thorough description of how to evaluate and select practices by their evidence base, also consider reading the CDC's *Understanding Evidence* publication, available at www.cdc.gov/violenceprevention.

Disclaimer

The information gathered for this evidence-based practice introduction is a summary of common practices and definitions found in recent literature. Though largely inclusive, this summary is by no means a comprehensive representation of all information, definitions, and standards to be found.

References

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- Individuals with Disabilities Education Improvement Act of 2004, Pub. L. No. 108-446.
- The Iowa Consortium for Substance Abuse Research and Evaluation. (2003). *Evidence-based practices: An implementation guide for community based substance abuse treatment agencies*. [Brochure]. Iowa City, IA: Author.
- No Child Left Behind Act of 2001, Pub. L. No. 107-110.
- Puddy, R. W. & Wilkins, N. (2011). *Understanding Evidence Part 1: Best Available Research Evidence. A Guide to the Continuum of Evidence of Effectiveness*. Atlanta, GA: Centers for Disease Control and Prevention.

Resources for Finding Evidence Based Programs

- 1) **The Best Evidence Encyclopedia** <http://www.bestevidence.org/>
The Best Evidence Encyclopedia provides unbiased reviews of research-proven education programs.
- 2) **Doing What Works: Research Based Education Practices** <http://dww.ed.gov/>
DWW is an online library of resources to help educators and administrators select and implement research based instructional practice.
- 3) **Promising Practices Network:** <http://www.promisingpractices.net/>
The Promising Practices Network provides information on research-based strategies and assistance in using that information to make positive changes.
- 4) **SAHMSA's National Registry of Evidence Based Programs and Practices:** <http://www.nrepp.samhsa.gov/>
The NREPP is a searchable online registry of more than 200 interventions supporting mental health promotion, substance abuse prevention, and mental health and substance abuse treatment.
- 5) **What Works Clearinghouse:** <http://ies.ed.gov/ncee/wwc/>
The What Works Clearinghouse is a collection of up-to-date research-based education practices.