

# Evidence-Based Practice

## *Foundation for the CONNECT 5-Step Learning Cycle™ in Professional Development*

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In 2006, ZERO TO THREE published *Evidence-Based Practice in the Early Childhood Field* (Buysse & Wesley, 2006). The purpose of this edited volume, which included contributions from a number of scholars, was to take a critical look at a contemporary concept that was sweeping the country and having a significant impact on the discourse about how research knowledge is generated, disseminated, and used across a number of professions. In early childhood, the term *evidence-based practice* had only recently entered the lexicon, but it was cropping up everywhere—in conference programs, grant announcements, journal articles, college courses and continuing education activities, and, of course, search engines on the Internet. At a time when the early childhood field was attempting to integrate scientific knowledge about the critical role of early experiences that support or inhibit children’s development (National Research Council & Institute of Medicine, 2000), there was a sense of urgency and importance surrounding the term evidence-based practice. The volume editors suggested evidence-based practice had become a movement that was expected to have a significant impact on all aspects of the field. But there were also questions about how the early childhood field arrived at the need for evidence-based practice and what precisely it would mean for early childhood professionals. The book represented an attempt to address these questions at a very early stage in reaching consensus on the relevance of this concept for early childhood. It called for changes that would lead to more useful forms of practice knowledge. Such changes would require organizing knowledge in a way that would respond to the immediate needs and specific problems in practice, focus directly on improving outcomes for children and families, integrate various sources of evidence, and be made widely available and accessible to practitioners, families, and other end users.

In this article, we reflect on the evolution of the field’s understanding of evidence-based practice since the book was released. We begin by reviewing the origins of the movement and definitions associated with it. Next, we identify resources for identifying programs and practices that have been evaluated through research and found to be effective. Finally, we share an application of evidence-based

### **Abstract**

**The movement toward evidence-based practice has had a tremendous impact on the early childhood field over the past 6 years. In this article, the authors describe the origins of the evidence-based practice movement for the early childhood profession and various definitions associated with it. They provide resources for identifying programs and practices that have been evaluated through research and found to be effective, and they share an application of evidence-based practice that has led to a recent innovation in professional development in early childhood: the CONNECT 5-Step Learning Cycle™.**



Photo: ©iStockphoto.com/Sean Locke

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practice that has led to a recent innovation in professional development in early childhood—the CONNECT 5-Step Learning Cycle™.

## Origins and Definitions

THE EVIDENCE-BASED PRACTICE movement was born in medicine in the 1990s and embodied in a pocket-size, blue book titled *Evidence-Based Medicine: How to Practice and Teach EBM* (EBM; Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000). Written for the busy practitioner who did not have time for detailed discussions on theory as the basis for treatment, EBM turned clinical practice and the way in which it was taught on its head. Sackett and colleagues offered the following definition: “Evidence-based medicine (EBM) is the integration of best research evidence with clinical expertise and patient values” (p. 1). A careful examination of this definition reveals exactly what was so innovative about this definition and why it has influenced the thinking of so many other professions outside medicine, including early childhood, education, and the mental health professions, among others. The word “integration” suggested, for the first time, that clinical decisions would be based on more than a single source of knowledge. Moreover, these sources of knowledge would have to be integrated when making a decision about a particular course of treatment. The EBM definition also used the term “best research” which suggested

that, if necessary, a practitioner could use the “best available” research evidence in making a clinical decision, even if the only research available wasn’t directly applicable to a particular situation or group of patients. The term “clinical expertise” referred to one’s craft knowledge, an acknowledgment of the wisdom practitioners gained through their professional experience. And finally, the term “patient values” represented a paradigm shift in medicine, requiring that clinicians consider patient beliefs and expectations as additional important sources of evidence in decision-making.

Drawing on these transformational ideas from EBM, Buysse and colleagues offered the following definition of evidence-based practice for the early childhood profession field: “Evidence-based practice is a decision-making process that integrates the best available research evidence with family and professional wisdom and values” (2006, p. 12; Buysse, Wesley, Snyder, & Winton, 2006). With direct parallels to the definition of EBM, this definition reflected the field’s values around (a) family engagement and (b) the wisdom and core beliefs of both families and the profession. However, proposing a definition of evidence-based practice proved to be only the beginning step in helping the field move in this direction. Since this definition was proposed, early childhood professionals have continued to debate the meaning of this term. However, several recent publications suggest that the definition of evidence-based practice proposed in 2006 is beginning to catch on in the early childhood field (IOM & NRC, 2012; Love, 2011; National Association for the Education of Young Children/National Association of Child Care Resource & Referral Agencies, 2011). Even when there is an agreed-upon definition, the decision to adopt an evidence-based approach leads to the challenge of finding reliable information about practices that have been evaluated through research.

## Resources for Identifying Research-Based Practices

TODAY IT IS possible to identify a number of Web sites across professions that provide information clearinghouses on the efficacy of specific treatments, programs, interventions, and practices. These Web sites and related resources are a direct outgrowth of the evidence-based practice movement in the U.S. and elsewhere. The Cochrane Collaboration is perhaps the most well-known clearinghouse of information on research-based medical treatments and interventions. The Campbell Collaboration was modeled after the Cochrane site and focuses on practices in the social sciences (e.g., social work, criminal justice, family

support). The What Works Clearinghouse is the official site of the U.S. Department of Education and focuses on disseminating educational practices and interventions that are research-based. The National Registry of Evidence-Based Practices and Programs sponsored by the Substance Abuse and Mental Health Services Administration focuses on mental health interventions. Each of these sites allows users to search for specific interventions and provides summaries of the research findings on the effectiveness of the intervention, along with appraisals of the quality and quantity of research related to a practice. And these are only a few examples. The evidence-based practice movement has spawned hundreds of these sites, some that are officially sanctioned by a federal agency and many others that were created by funded projects, professional organizations, or state and local agencies. Although many clearinghouses exist, there are relatively few early childhood practices that have been evaluated through research and the study findings summarized. For instance, the What Works Clearinghouse offers only a select number of research syntheses in relation to the many early care and education practices that early childhood practitioners need in their work settings. One example of a relevant research synthesis in early childhood is the summary on dialogic reading provided by What Works Clearinghouse (U.S. Department of Education, 2007). Another example is the summary of research-based home visiting programs provided by the Home Visiting Evidence of Effectiveness Project available on the U.S. Department of Health and Human Services (Administration for Children and Families) Web site.

## Applications for Professional Development

IN 2010, THE National Council of Accreditation for Teacher Education released a seminal report that called for a transformation of professional development through the adoption of clinical practice and teaching, an approach that was consistent with evidence-based practice. This call for reform represented a paradigm shift in the field of education away from the traditional focus on content knowledge toward a clinical teaching model that is practice-centered, research-based, and driven by measures of teaching effectiveness. With funding from the U.S. Department of Education, Office of Special Education Programs, the CONNECT project, a partnership between the Frank Porter Graham Child Development Institute and the University of Kentucky, was established to develop Web-based modules that corresponded to this shift to a clinical teaching model. The CONNECT

modules (Winton, 2010) are organized around specific research-based practices that higher education faculty and professional development providers can use to enhance teacher education in early childhood. The CONNECT modules reflect a clinical teaching model, a direct by-product of EBM, and, more recently, the evidence-based practice movement outside of medicine. The CONNECT modules are designed for faculty of students earning early childhood degrees or credentials at the 2- or 4-year degree level. The modules are free, and contain resources for both learners and instructors (e.g., activities, handouts, video and audio clips, and instructor guides with suggested assessments and facilitation tips), and are easily located by using an online search engine. This innovation was described in a recent report on the early care and education workforce (IOM & NRC, 2012).

Each module is centered around the CONNECT 5-Step Learning Cycle™ adapted from the 5-step process used in EBM to prepare health care professionals, and each module also corresponds to the shift to a clinical teaching model that National Council for the Accreditation of Teacher Education (2010) referenced. The 5-Step Learning Cycle and the CONNECT approach to professional development is best understood by viewing the modules and accompanying resources, and better yet, by experiencing the modules as either an instructor or learner. However, a brief explanation of each of the five steps is provided here to help the reader gain more insight into how this approach can be used to enhance professional development. Figure 1 illustrates the CONNECT 5-Step Learning Cycle that serves as an organizing framework



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**Defining a practice is critically important within a clinical teaching or evidence-based approach to professional development.**

within each of the modules.

In Step 1, the learner is introduced to a real-life practice dilemma, a problem that requires the learner to look beyond the immediate situation to seek information about a particular practice from various sources. The CONNECT modules draw on real-life situations experienced by early childhood practitioners, children, and families and provides videos, scripts, activities, and handouts that make these dilemmas relevant to issues faced in practice settings.

In Step 2, the learner is shown how to turn this dilemma into an answerable question using a mnemonic called PICO which was borrowed from medicine (see box, The Meaning of PICO). The question is then used to generate terms that can be entered into a

### THE MEANING OF PICO

- P – Person (characteristics of the children who will receive the intervention)
- I – Intervention being considered
- C – Comparison to other interventions (if there is research that compares two or more interventions)
- O – Outcomes desired

Source: CONNECT: The Center to Mobilize Early Childhood Knowledge (2012)

search engine or library database to locate research reviews and syntheses about a particular practice. The goal of Step 2 is to help faculty and learners understand how such a search could be conducted to locate research knowledge and to use this information to inform decisions in practice.

In Step 3, the learner turns to broader sources of evidence to address the question about a particular practice posed in Step 2. The sources of evidence include research as well as policies and experience-based knowledge. Let's look more closely at each of these sources of evidence. Each CONNECT module provides a summary of existing research syntheses or, if a research synthesis does not exist, CONNECT creates a research summary from other sources. Policies, position statements and other consensus documents related to the practice are summarized in each CONNECT module within a "policy advisory." CONNECT modules also incorporate experience-based knowledge by featuring voices from the field and from families who have experience and perspectives to share related to a particular practice.

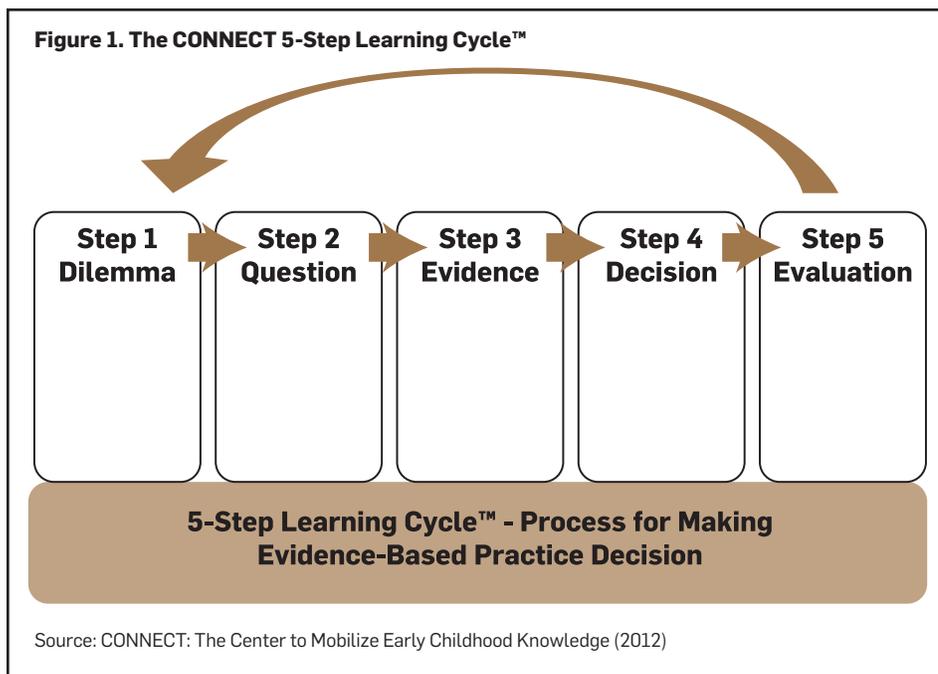




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Every practitioner must consider whether a particular practice is appropriate for a particular child or family within a specific local context.

## Learn More

### CONNECT: THE CENTER TO MOBILIZE EARLY CHILDHOOD KNOWLEDGE

<http://connect.fpg.unc.edu/>

The CONNECT project is developing Web-based, instructional resources for faculty and other professional development providers that focus on and respond to challenges faced each day by those working with young children and their families in a variety of learning environments and inclusive settings.

### EVIDENCE-BASED PRACTICE EMPOWERS EARLY CHILDHOOD PROFESSIONALS AND FAMILIES, FPG SNAPSHOT #33

[http://dev.community.fpg.unc.edu/sites/community.fpg.unc.edu/files/imce/documents/FPG\\_Snapshot\\_N33\\_EvidenceBasedPractice\\_09-2006.pdf](http://dev.community.fpg.unc.edu/sites/community.fpg.unc.edu/files/imce/documents/FPG_Snapshot_N33_EvidenceBasedPractice_09-2006.pdf)  
FPG Child Development Institute (2006)  
Chapel Hill, NC: FPG Child Development Institute.

### THE COCHRANE COLLABORATION

[www.cochrane.org](http://www.cochrane.org)

### THE CAMPBELL COLLABORATION

[www.campbellcollaboration.org](http://www.campbellcollaboration.org)

### WHAT WORKS CLEARINGHOUSE

<http://ies.ed.gov/ncee/wwc/>

### NATIONAL REGISTRY OF EVIDENCE-BASED PRACTICES AND PROGRAMS

<http://nrepp.samhsa.gov/>

### HOME VISITING EVIDENCE OF EFFECTIVENESS

<http://homvee.acf.hhs.gov/>

Defining a practice is critically important within a clinical teaching or evidence-based approach to professional development, yet these definitions are rare and not widely available in early childhood. To address this need, each module includes a brief, memorable definition focused on clearly observable practices. In addition, each module includes a number of brief video demonstrations of the practice (e.g., embedded interventions, collaborating with families, assistive technology interventions, attending and active listening communication skills) being used effectively by practitioners in real life settings

In Step 4, the learner is asked to integrate the unique perspectives and contexts from the dilemma (Step 1) with various sources of evidence (Step 3) to make a decision about whether to adopt a particular practice. The learner is also given support in planning for implementation. Implementation plans and checklists provided within the modules can be used in multiple ways. They can be used by faculty to provide corrective feedback to learners who are acquiring new skills and by learners to support implementation in practice settings.

In Step 5, the learner considers ways to evaluate the practice. Resources are provided to guide the learner in determining what information will be gathered to monitor implementation and evaluate the results of the intervention.

The list below shows CONNECT modules currently available and one that will be released soon.

- Module 1: Embedded Interventions
- Module 2: Transition
- Module 3: Communication for Collaboration
- Module 4: Family-Professional Partnerships
- Module 5: Assistive Technology Interventions
- Module 6: Dialogic Reading Practices
- Module 7: Tiered Instruction (Coming Spring 2012)

## Conclusion

**I**N THIS ARTICLE, we examined the evolution of evidence-based practice in early childhood and we considered how this movement has influenced the shift toward a clinical teaching model reflected in the CONNECT 5-Step Learning Cycle. We conclude by noting that it is not sufficient to determine whether a practice is research-based. Every practitioner must consider whether a practice is appropriate for a particular child or family within a specific local context. This means that to become an evidence-based field, early childhood practitioners will need to be equipped with the knowledge and skills to judge the relevance and feasibility of a particular practice and to integrate multiple sources of evidence to enable sound decision-making in practice. 🦋

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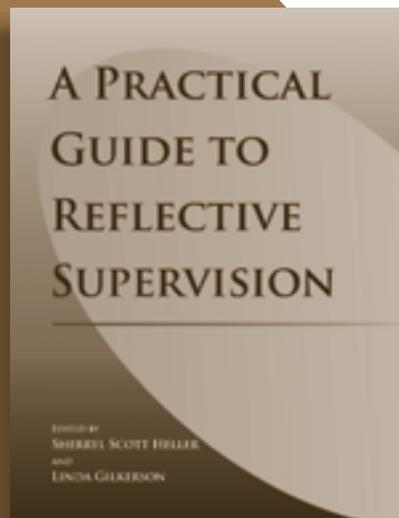
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