

What is the role of professional development in evidence-based practice in adult education?

- A session sponsored by the Association of Adult Literacy Professional Developers and NCSALL
- Facilitated by Beth Bingman, Susan Joyner and Cristine Smith

Focus of this session

- The role of professional development in promoting evidence-based practice.
 - What is evidence-based practice?
 - What have we learned about helping teachers access, understand and use research?
 - What do we need to do it?

Why discuss evidence-based practice in education?

- Increasing emphasis in all of education for instruction and services to be based on evidence; i.e., practice should be based on evidence, not on intuition, fads or trial and error.

What counts as evidence-based practice?

- Grover (Russ) Whitehurst (Asst. Secretary of Ed, head of the Institute of Education Sciences) has said that evidence-based education is:
 - *The integration of professional wisdom with the best available empirical evidence in making decisions about how to deliver instruction.”* [\[1\]](#)

[\[1\]](#) This quote can be viewed at <http://www.ed.gov/offices/IES/speeches/evidencebase.html>.

What is professional wisdom?

- The judgment that individuals acquire through experience.

Grover J. (Russ) Whitehurst, Assistant Secretary
Educational Research and Improvement, U.S. Dept of Education

- Professional wisdom includes expert opinion and practitioner knowledge.

What is empirical evidence?

- Scientifically based research from fields such as psychology, sociology, economics, and neuroscience, and especially from research in educational settings
- Objective measures of performance used to compare, evaluate, and monitor progress

Grover J. (Russ) Whitehurst, Assistant Secretary
Educational Research and Improvement, U.S. Dept of Education

Why are both professional wisdom and empirical evidence necessary for evidence-based practice?

- Without professional wisdom, education cannot:
 - adapt to local circumstances
 - operate intelligently in the many areas in which research evidence is absent or incomplete.
- Without empirical evidence, education cannot:
 - resolve competing approaches
 - generate cumulative knowledge
 - avoid fad, fancy, and personal bias

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Distinction between evidence-based practice and scientifically based research

- Two different concepts:
 - Evidence-based practice: It's about what should drive practice (using empirical evidence and professional wisdom to make decisions).
 - Scientifically based research: It's about what type of research should generate the empirical evidence (research that, according to DOE, meets particular criteria: experimental design, peer-refereed journal, sample size and selection, etc.)

Empirical evidence

Research produces knowledge that can be used to design models of program service.

Evaluation tests models of program service to see if they work or to see which of two or more models works best.

Hierarchy of Evidence

- Experimental employs two identical groups of participants that are randomly assigned to treatment and control groups.
- Quasi-Experimental employs treatment and comparison groups that are not randomly assigned but appear to be identical, though they may have unseen differences
- Correlational with statistical controls employs treatment and comparison groups that are not identical but researchers use statistics to control for differences that may be important
- Correlational without statistical controls employs treatment and comparison groups that are different, but researchers assume that the difference may not be important; sample is usually large.
- Case studies may employ only a treatment group and assumes differences among participants are not important or are obvious; sample is usually small.

Why is practitioner knowledge important?

- To apply and adapt research findings to local context
- To raise new questions that can be addressed through basic and applied research.

Distinction between practitioner research and practitioner knowledge

- *Practitioner research* is a process and activity where teachers conduct inquiry in their own classroom or program, using a systematic research approach:
 - research question,
 - collect data to answer question,
 - analyze data,
 - formulate answer to questions and implications for practice & further research.
- *Practitioner knowledge* is what teachers learn when they adopt and adapt research findings in their classroom or program, then share their experiences (may not backed up by data and analysis)

What does this mean for adult education?

- Overall, this means that there will be an increasing emphasis on funding programs that can show how their practice is informed by research (particularly scientifically based research).
- But, evidence-based practice does NOT mean that ONLY empirical information from research should drive practice.

What have we learned?

- Over the past 7 years, we (NCSALL) have been investigating how to help teachers use research to improve their practice (be “consumers” of research)
- Professional development is a vital link between research and practice.

What have we learned about the role of professional development?

- Short cut of professional developers digesting the research and then presenting it to practitioners won't be the magic bullet, although professional developers need to be research consumers themselves.
- Even though new curriculum can be designed based on empirical information about what works, our stance is that you can't just skip teachers.
- Teachers themselves need to grapple with the research: learn about, judge, and critically analyze the research, then plan how to use it.

What have we learned about the role of professional development?

- Teachers thinking like researchers leads to better practice. It's not enough that they know that the curriculum is based on empirical evidence.
- Teachers will need to:
 - access,
 - understand
 - judge and
 - use research in their instruction.

Professional Development Methods

- Teachers need to be supported to be involved in research. (We're not saying that they have to do research, although that helps).
- Teachers need to be supported to participate in professional development that is specifically designed with components that help them:
 - read the research,
 - discuss what it means,
 - discuss whether it's valid for their learners/their teaching situation, and
 - plan how to use these research findings in their classrooms and programs.
 - share and reflect on their experiences applying research findings.

Professional Development Methods

- Articles and reports: *Focus on Basics* translates research for practitioners, to make it accessible and understandable.
- But reading on one's own is only one format for learning about research findings.

Examples of professional development activities that help teachers access, understand and use research

- Study circles
- Teaching materials
- Practitioner research
- Mentor teacher groups

Features of professional development that support research “consumerism”

Professional development should have:

- Adequate time
- Facilitated support for teachers (who may have different perceptions of research)
- Opportunities to discuss and share with other practitioners in teams/groups, either face-to-face or on-line
- Connection with researchers

Research on how teachers view and understand research

- Zeuli & Tiezzi (1993): Identified 3 views teachers have about research:
 1. Research is useless; it should have a direct impact on practice but it doesn't.
 2. Research can be useful; it should have a direct impact on practice and it does.
 3. Research is useful; it shouldn't necessarily have a direct impact on practice; rather it should expand my understanding of teaching.
- Small sample, case studies: Zeuli & Tiezzi found that level of education (masters' degree or not) wasn't related to a teacher's perception of research, but collaboration with researchers was.

Zeuli, J.S. & Tiezzi, L.J. (1993) *Creating contexts to change teachers' beliefs about the influence of research*. National Center for Research on Teaching and Learning, Report #1.

What else is needed for evidence-based practice?

- Only practitioners can generate the “professional wisdom” side of the EBP equation.
- So, we need a mechanism for teachers to share their practitioner knowledge: What practitioner knowledge did they generate when they applied research findings, and what are the implications of that for further research?

What we have learned about promoting evidence-based practice?

- Evidence-based practice doesn't only come about through professional development of teachers. Teachers don't always have the power to make changes the way they want.
- Changes in practice must be supported by changes in policy.
- Policy makers also need to access, understand and use research to set policies about program funding and structure

What we have learned about promoting evidence-based practice?

- Teacher change as a result of professional development doesn't happen in a vacuum: teacher change is influenced through an interaction of individual, professional development, program and system factors (Smith and Hofer, 2002*)
- Individual factors that influence teacher change include:
 - **Reason for attending staff development:** those with a strong need to learn, either on the topic or about good teaching and student success, changed more.
 - **First teaching:** those who began teaching career in ABE (not K-12) changed more
 - **Years of experience in the field:** those with fewer years of experience changed more
 - **Level of education:** those with master's degrees and above less likely to change on the topic

*Smith, C. and Hofer, J. (2002) Pathways to Change: A Summary of Findings from NCSALL's Staff Development Study, *Focus on Basics*, 5(D).
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What we have learned about promoting evidence-based practice?

- Staff development factors that influence teacher change:
 - **Hours of NCSALL staff development attended:** more hours, more change
 - **Quality of staff development** (as rated by researchers): higher quality, more change.
 - **Perceived quality of staff development** (as rated by teachers): higher rating, more change

What we have learned about promoting evidence-based practice?

Program/system factors that influence teacher change:

- **Access to benefits:** those who received benefits through ABE job were more likely to change
- **Access to prep time:** those who received paid prep time were more likely to change
- **Program situation:** those who worked in programs that were not already taking action related to the topic of the professional development AND where teachers had a voice in decision-making
- **Number of working hours in ABE:** those who worked more hours were more likely to change
- **Required curriculum:** those with freedom to make changes in goals, content, materials or activities were more likely to change