

Evidence-based literacy practice in education

Dr Kerry Hempenstall, RMIT

Effective Teaching Strategies 2006
Professional Development Day

Melbourne University Private, Hawthorn

November 17, 2006



Other materials and articles may be downloaded from Kerry's webpage at:
www.rmit.edu.au/staff/kerry_hempenstall

Evidence-based education

(Teachers should) engage with the *evidence-based* research literature on *what works* for students, with and without learning difficulties, and understand what constitutes *evidence* (National Inquiry into the Teaching of Literacy, 2005).

Why should education embrace research?

Those fields that have displayed unprecedented development over the last century, such as *medicine, technology, transportation, and agriculture* have been those embracing research as the prime determinant of practice (Shavelson & Towne, 2002).

What might it offer education?

Reduce the pendulum swings we've endured, and redress educational *achievement differences* in our community (Slavin, 2002).

Evidence-based literacy education

Issue: Acceptance of research evidence as prime informant of policy and practice:

- By educational policy makers
- In teacher education programs

Research can help with many questions

- Are all reading approaches equally effective?
- Is slow initial progress cause for concern?
- Can teaching alter the trajectory of disadvantaged students?
- Is social promotion or retention best?
- Do smaller class sizes make a difference?

Evidence-based education: The integration of professional wisdom with the best available *empirical evidence* in making decisions about how to deliver instruction (Whitehurst, 2002). It doesn't supplant the *craft* of teaching

Research informing practice?

- Pressure for change is building within education.
- Its purely *artisan cloak* challenged
- Adopt the demeanour of a research-based profession

Artisan cloak? When experience, personality, intuition, or creativity are the *sole* determinants of practice, we risk *inconsistency* at the individual level, and *disaster* at the system level.

Pressure for reform

State and national testing effects:

- greater public awareness of student progress
- government budgetary vigilance
- increased attention to the long-term effects of curricula.

How might reform occur? Research-based educational practices are either mandated as in Great Britain (Primary National Strategy, 2006) or as a pre-requisite for funding – USA (2001 *No Child Left Behind Act*)

How might reform occur?

In GB, the *Primary National Strategy* (2006) arose from the Rose Report (2006). In the USA, the *No Child Left Behind Act* (2001) arose from the report of the National Reading Panel (2000). In Aus, the report of the National Inquiry into the Teaching of Literacy (2005). Will policy reform follow here too?

Each report emphasises evidence-base

Educational *decision-makers* have lacked a scientific framework, and been inclined to accept proposals based on good intentions and unsupported opinions (Carnine, 1991)

What do these reports & policies say?

Primary National Strategy (2006)

- *Simple view* of reading replaces 3 cueing model
- Explicit phonics is the focus in beginning reading
- Direct instruction is the optimal method for teaching early reading
- Decoding and comprehension are separate targets

No Child Left Behind Act (2001)

Federal funds support only programs and strategies supported by scientifically based research.
Lots of money and a sting in the tail

If schools accept US federal funds

- Test maths and reading 3-8 every year
- Fail state test = retention & higher level of assistance
- Overall school results determine Adequate Yearly Progress (AYP)
- Must report the scores for statewide testing to parents

Reading First

- a systematic approach to recognizing reading difficulties in Prep
- ensure teachers know how to apply appropriate remedial measures.
- \$900 million per year
- measure foundation skills,
- continuously monitor progress, e.g., DIBELS
- PD to provide teachers with *proven methods* to remediate reading failure with direct instruction.
- Explicit emphasis on *phonemic awareness, phonics, fluency, vocabulary, and comprehension.*

National Inquiry into the Teaching of Literacy (2005)

Recommends a national program to:

- • produce *evidence-based guides* for effective teaching practice - the first to be on reading;
- • promote research into the most effective means of *preparing pre-service teachers* to teach reading.

“Direct systematic instruction in phonics during the early years of schooling is an essential foundation for teaching children to read. All students learn best when teachers adopt an integrated approach to reading that *explicitly* teaches phonemic awareness, phonics, fluency, vocabulary and comprehension.”

A renewed emphasis on the potential role of *instruction*

POLS & VELs: They are not yet consonant with this research, but there is enough room to move to be consistent with both perspectives.

Victorian Essential Learning Standards (VELs)

Essentially constructivist model

- Students begin to grapple with ...
- Students develop further ...
- Students become more adept at ...
- Students are becoming more ...

VELs Reading “They recognise how sounds are represented alphabetically, and identify some sound-letter relationships”

Strategies for reading:

- “Predicting, checking, confirming and self-correcting” – 3 cueing system
- “They use context ... to make meaning”

Principles of Learning and Teaching P-12 (POLS)

- 1.4 ensures each student experiences success through *structured* support, the valuing of effort, and recognition of their work.
- 3.1 uses strategies that are flexible and *responsive* to the values, needs and interests of individual students
- 4.1 plans sequences to promote *sustained learning* that builds over time and emphasises connections between ideas
- 5.2 ensures that students receive frequent constructive *feedback* that supports further learning
- 5.5 uses evidence from *assessment* to inform planning and teaching.

But, there are numerous **red herrings in education** with little evidence to support them.

- Learning styles & multiple intelligences. No evidence that identifying and teaching to students "intelligences" improves academic performance (Klein, 1997). However, there is evidence that teaching multiple representations is educationally useful for all.
- Irlen lenses. Coloured lenses that "cure" dyslexia,
- Dore program (cerebellum training)
- Kinesiology

And more!

Megavitamins, Allergy treatment, Chinese herbs, Evening Primrose Oil & vitamin A, Chiropractic, Cranial sacral therapy, Stimulants, Tranquillizers, Anti-histamine, Anti-convulsants, Dolphin therapy, Brain gym, Sensory integration; Active breathing; Eye exercises; "vision therapy".

Evidence from meta-analyses (Lloyd, Forness, & Kavale, 1999, 2005)

Whole language 180 studies 637 effect sizes Overall ES = 0.09

Perceptual/motor training 180 studies 117 effect sizes Overall ES = 0.08

Learning styles 39 studies 205 effect sizes Overall ES = 0.14

Early intervention programs 74 studies 215 effect sizes Overall ES = 0.68

Direct Instruction (DI) 25 studies 100+ effect sizes Overall ES = 0.82

Behavioural treatment of classroom problems of students with behaviour disorder 10 studies 26 effect sizes Overall ES = 0.93

Where to find information about evidence-based interventions www.peri.org.au/

What Works Clearinghouse: U.S. Department of Education - trusted source of scientific evidence of what works in education.

Eric Digests Short reports (1,000 - 1,500 words) on topics of prime current interest in education

International Campbell Collaboration: Systematic reviews of evidence on the effects of interventions in the social, behavioral, and educational arenas.

Social Programs That Work: Programs that are backed by rigorous evidence of effectiveness.

Coalition for Evidence-Based Policy. Identifying educational practices supported by rigorous evidence

Partnership for Reading - a database with abstracts of approximately 460 research studies related to the teaching of reading in grades K-3.

Promising Practices Network: Programs for improving outcomes for children, youth, and families.

Comprehensive School Reform Program Report on scientifically based research on Comprehensive School Reform.

Blueprints for Violence Prevention: Initiative for reducing adolescent violent crime, aggression, delinquency, and substance abuse.

Florida Center for Reading Research: Information about research-based practices related to literacy instruction and assessment for children in P-12

American Institutes for Research (2005): Guide evaluating quality and effectiveness of 22 primary school teaching models.

About Direct Instruction www.peri.org.au/

In a major meta-analysis of research *Comprehensive School Reform and Student Achievement*, Direct Instruction was given the highest classification (Center for Research on the Education of Students Placed At Risk, 2002)

Council for Exceptional Children makes judgments on professional practices
Alert series on Phonological Awareness, Social Skills Instruction, Class-wide Peer Tutoring, Reading Recovery, Mnemonic Instruction, Co-Teaching, Formative Evaluation, High-Stakes Assessment, Direct Instruction, Cooperative Learning.

Oregon Reading First Center reviewed and rated 9 comprehensive reading programs. Programs had to include materials grades from P-3; and address the five essential components of reading.

Predicting the future

- Approaches have to produce evidence of measurable gains
- Education faculties changed dramatically as a new generation takes control
- Teachers become evidence-based practitioners in their classrooms
- Student failure will be noticeable and addressed systematically
- Overall rates of student failure fall

We're not there yet!

Parent information sheet: X Park Primary School 2003

It is inappropriate for your child to be directed to '*sound-out*' words, using individual letter sounds, as many words cannot be identified in this manner.

XXX PS Teaching your child reading strategies 2002

If your child has difficulty with a word:

- Ask your child to look for clues in the *pictures*
- Ask your child to read on or reread the passage and try to fit in a word that *makes sense*.
- Ask your child to look at the *first letter* to help guess what the word might be.