

KERA UPDATE

June 2000

About The Kentucky Education Reform Act

#47

The Dismal Quality of Education Research

I've now been involved with research on education for more than six years. During this time, despite educators' claims that they really understood how children learned, I developed the strong opinion that there was remarkably little scientifically based research to support such assertions. Now, my totally subjective opinion has very firm and highly scientific support. And the situation is positively scary!

Consider the source of the evidence. Recent legislation sponsored by Kentucky Congresswoman Anne Northrup created the National Reading Panel (NRP). This group was charged to develop "...an evidence based assessment of the scientific research literature on reading and its implications for reading instruction."

NRP was very carefully organized. The federal Department of Education was not placed in charge. Instead, NRP was convened by the National Institute of Child Health and Human Development (NICHD). NICHD has sponsored highly scientific research on reading for a number of years and was uniquely qualified to recruit not only top educators, but also leading members of the scientific, medical and psychological communities. NICHD also included parents.

The NRP established a scientifically rigorous set of standards for acceptance of education research. The "...evidence based methodological standards adopted by the Panel are essentially those used in research studies of the efficacy of interventions in psychological and medical research." The Panel believed reading instruction should be held to a similar high standard.

Guess what happened when the NRP started examining reading research. Quite simply, the results were ugly.

As shown below, the NRP surveyed large numbers of reports and papers in a variety of important topic areas. With the exception of computer use, the NRP found plenty of papers in the initial search. But, when these papers were judged for adequate rigor such as: sufficient identification of ages, sufficient demographics, replicability, fidelity of instruction actually provided, and full description of actual outcomes, the number of usable studies was, to be blunt, paltry. Quite simply, the "noise level" of unscientific research in this important area of education is simply staggering.

How can policy-makers and the public possibly make good decisions about education when the scientific adequacy of

the vast majority of the research is so low?

**In education, beware the statement:
"research shows!"**

The NRP probably is the most scientifically astute panel ever assembled to look at reading instruction. We need to do the same thing for other subjects. Right now, for example, real mathematicians and scientists are screaming about math instructional methods being promoted by the federal Department of Education. In light of the example from the NRP, Congresswoman Northrup better gin up some more panels to look at things like math and science before we make more serious mistakes about what really works in education.

Report Usability for the Topic Areas Examined by the National Reading Panel

Specific Topic Area of Research	Reports Found With Initial Search	Reports with Adequate Scientific Rigor	Percentage, Reports with Adequate Rigor
Phonemic Awareness	1,962	52	2.7%
Phonics Instruction	1,373	38	2.8%
Guided Oral Reading	364	16	4.4%
Vocabulary Instruction	20,000 (Plus)	50	0.25% (At Best)
Text Comprehension	481	205	42.6%
Teacher Preparation/ Comprehension Strategies	635	4	0.63%
Teacher Education and Reading Instruction	300 (Plus)	32 (But insufficient for optimum use)	10.7% (At Best)