Five Missing Pillars of Scientific Reading Instruction

Richard L. Allington, Ph.D., University of Tennessee, USA

In the U.S., the National Reading Panel report (2001) set forth five pillars of scientific reading instruction: phonological awareness, phonics, fluency, vocabulary, and comprehension. There is little disagreement these are critical aspects of reading acquisition. But even the NRP listed a number of areas of research that they felt deserved review (but that did not have the time or funding to do). Below is my list of five additional pillars of scientific reading instruction based on the available evidence concerning what really matters for learning to read. Each of these five pillars seems absolutely essential elements of "scientific' reading instruction. I provide citations for recent papers pointing to the scientific evidence supporting these additional pillars.

1. Access to interesting texts and choice. Kids need easy access to a large supply of texts they can read and are interested in reading. Guthire and Humenick (below) completed a meta-analysis on a number of studies of classroom reading instruction and found that when classroom environments provided lots of interesting and appropriate texts the impact on reading achievement was three times greater than the National Reading Panel found for providing systematic phonics instruction.

Guthrie, J. T. and N. M. Humenick (2004). Motivating students to read: Evidence for classroom practices that increase motivation and achievement. *The Voice of Evidence in Reading Research*. P. McCardle and V. Chhabra. Baltimore, Paul Brookes Publishing**:** 329-354.

Fink, R. (2006). *Why Jane and Johnny couldn't read -- and how they learned.* Newark, DE: International Reading Association.

2. ***Matching kids with appropriate texts.*** Kids cannot learn much from texts they cannot read. They cannot learn to read from difficult texts. They cannot learn science or social studies from difficult texts. The first step in planning effective instruction is finding texts that match the reading level and conceptual levels of the students you will be teaching. While many classrooms provide a large supply of grade level texts that are appropriate for normally developing readers in too many classrooms there is scant supply of off-level texts for struggling readers. Struggling readers need appropriately difficult books in their hands all day long.

Allington, R. L. (2006). Critical factors in designing an effective reading intervention for struggling readers. In C. Cummins (Ed.), *Understanding and implementing Reading First initiatives.* Newark, DE: International Reading Association.

Swanson, H. L., & Hoskyn, M. (1998). Experimental intervention research on students with learning disabilities: A meta-analysis of treatment outcomes. *Review of Educational Research, 68*(3), 277-321.

O' Connor, R. E., K. M. Bell, et al. (2002). Teaching reading to poor readers in the intermediate grades: A comparison of text difficulty. *Journal of Educational Psychology* 94(3): 474-485.

3. ***Writing and reading have reciprocal positive effects.*** The more effective curriculum plan ensures that reading and writing, composing and comprehension, decoding and spelling lessons are well-linked so as to take advantage of the natural reciprocity between the various reading and language processes. Less effective curriculum plans create lessons where decoding

and spelling are separate lessons, where writing activities have no relationship to reading activities. Such curriculum plans ensure that the natural reciprocity will not be tapped.

Hefflin, B. R., & Hartman, D. K. (2003). Using writing to improve comprehension: A review of the writing to reading research. In C. C. Block, L. B. Gambrell & M. Pressley (Eds.), *Improving comprehension instruction: Rethinking research theory, and classroom practice.* New York: Guilford.

Tierney, R. J. and T. Shanahan (1991). Research on reading-writing relationships: Interactions, transactions and outcomes. *Handbook of Reading Research, vol. 2.* R. Barr, M. Kamil, P. Mosenthal and P. D. Pearson. New York, Longman. pp. 246-280.

4. ***Classroom organization: Balance whole class teaching with small group and side-by-side instruction.*** Whole class instruction is simply unscientific. Children differ and effective classroom reading instruction provides a balanced mixture of whole class, small group, and side-by-side instruction all day long.

Taylor, B. M., P. D. Pearson, et al. (2000). Effective Schools and accomplished teachers: Lessons about primary grade reading instruction in low-income schools. *Elementary School Journal 101*: 121-165.

Allington, R. L., & Johnston, P. H. (Eds.). (2002). *Reading to learn: Lessons from exemplary 4th grade classrooms.* New York: Guilford.

5. Availability of expert tutoring. Some students simply need more intensive and more expert instruction if they are to maintain a pace of development that is comparable to their peers. Ensuring that such children have access to expert tutoring is essential if no child is to be left behind. Further, there exists little evidence supporting interventions where the instructional group is larger than 5 students. While tutoring is the most powerful design, expert very small group (n= 2-3) instruction will be sufficient to accelerate the development of many struggling readers.

D'Agostino, J. V. and J. A. Murphy (2004). A meta-analysis of Reading Recovery in United States schools. *Educational Evaluation and Policy Analysis, 26(*1): 23-38.

Allington, R. L. (2004). Setting the record straight. *Educational Leadership 61*(6): 22-25.

U.S. Department of Education (2005) *Identifying and Implementing Educational Practices Supported By Rigorous Evidence: A User Friendly Guide.* Retrieved on 12/13/05 from: www.ed.gov/rschstat/research/pubs/rigorousevid/guide_pg3.html
Presented at the National Reading Conference, Los Angeles, December 2006.

What is Evidence-Based Education?

"The integration of professional wisdom with the best empirical evidence in making decisions about how to deliver instruction."

Grover "Russ" Whitehurst
Assistant Secretary of Education
U.S. Department of Education

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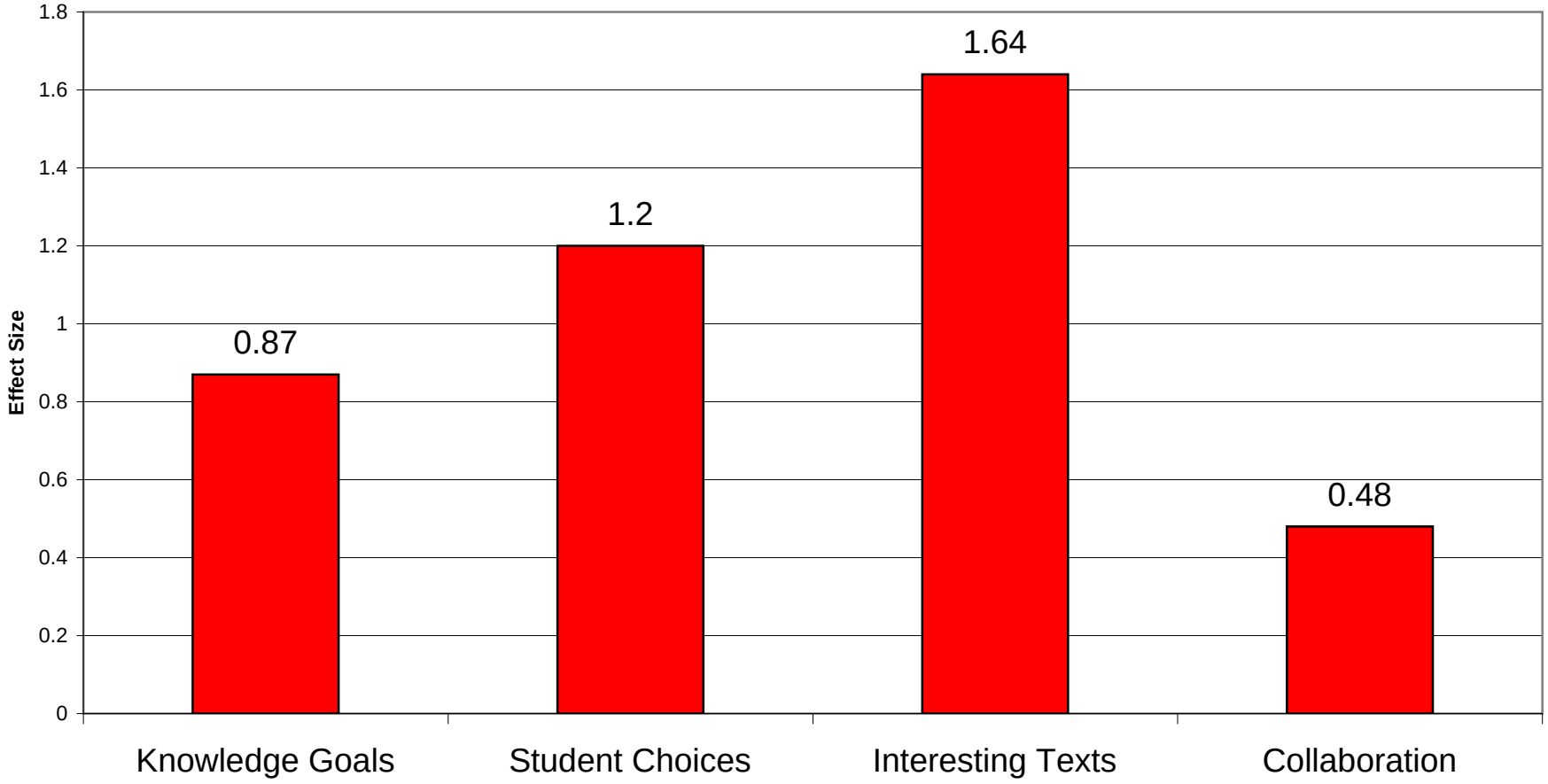
Benefits of motivational classroom practices for students' reading comprehension and achievement



Source: John Guthrie and Nicole Humenick. (2004). *Motivating Students to Read: Evidence for Classroom Practices that Increase Reading Motivation and Achievement*

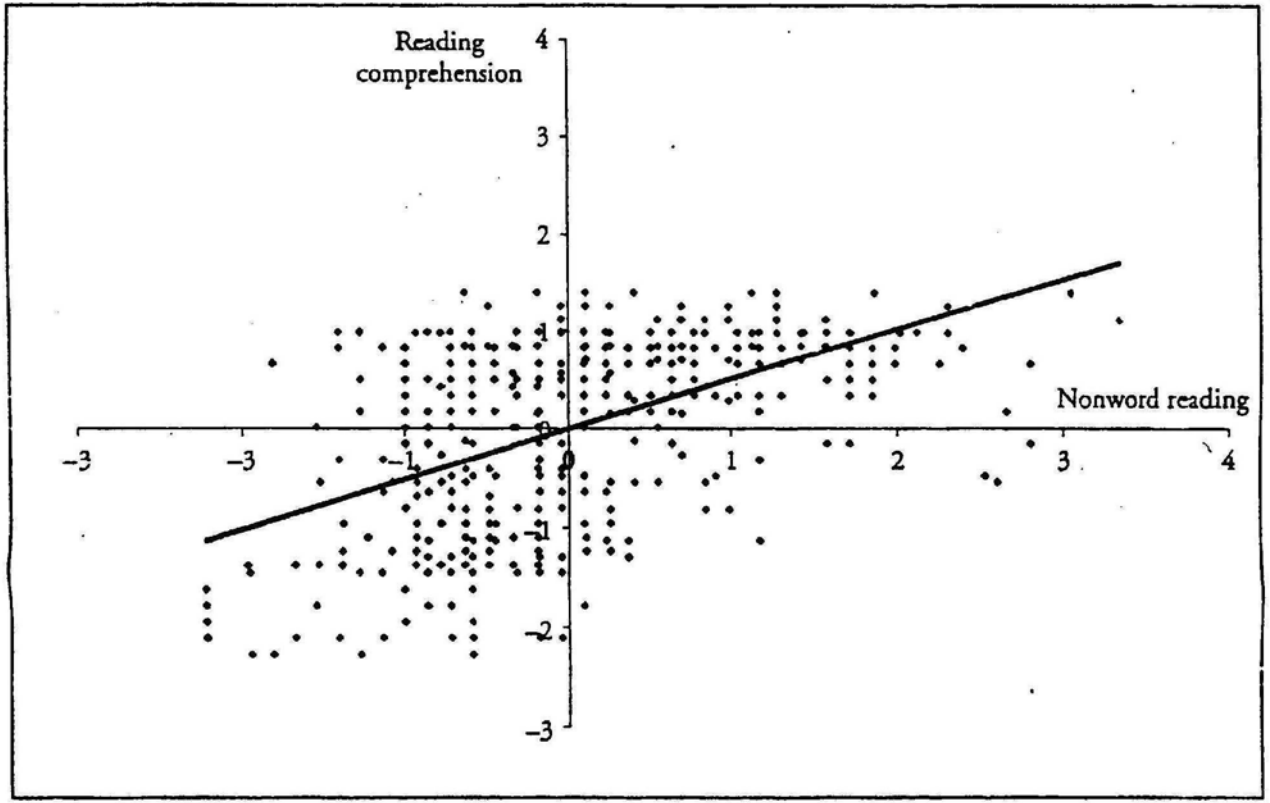


Figure 14.1 Scatterplot showing the relationship between reading comprehension and nonword reading in 411 7–10-year-old children (z-scores).