

<b>DOCUMENT(S) REVIEWED:</b>	<b>Whole language high jinks: How to tell when “scientifically-based reading instruction” isn’t.</b>
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<b>PUBLISHER/THINK TANK:</b>	<b>Thomas B. Fordham Institute</b>
<b>DOCUMENT RELEASE DATE:</b>	<b>January 29, 2007</b>
<b>REVIEW DATE:</b>	<b>February 14, 2007</b>
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<b>EPSL DOCUMENT NUMBER</b>	<b>EPSL-0702-225-EPRU</b>

**Summary of Review**

In *Whole language high jinks: How to tell when ‘scientifically-based reading instruction’ isn’t*,<sup>1</sup> Louisa Moats contends that she provides “the necessary tools to distinguish those [programs] that truly are scientifically based... from those that merely pay lip service to science” (p. 10). This review finds that Moats exaggerates the findings of the National Reading Panel (NRP), especially the effects of systematic phonics on reading achievement. She also ignores research completed since the NRP report was issued seven years ago. Perhaps most disturbingly, she touts primarily commercial curriculum products distributed by her employer — products that have far fewer published studies of effectiveness than the products and methods she disparages.

These flaws pervade the report’s subsequent discussion of what “scientifically based reading instruction” should look like. In the end, the Fordham report works more effectively as promotional material for products and services offered by Moats’ employer, SoprisWest, than as a reliable guide to effective reading instruction.

## Review

### I. INTRODUCTION

In *Whole language high jinks: How to tell when “scientifically-based reading instruction” isn’t*, Louisa Moats contends that particular commercial curriculum products are “scientific” while other available products do not meet this standard. Her report resumes the arguments she made in her earlier paper, *Whole Language Lives On*, released in 2000, also by the Fordham Institute.

Moats sets out several criteria of scientifically based reading instruction (SBRI), primarily referencing the report of the National Reading Panel<sup>2</sup> (NRP) to support her assertions. At the same time, she suggests that a progressive cabal (e.g., whole language enthusiasts) has effectively restricted the implementation of SBRI such that “ineffectual and discredited practices” continue in too many schools (p. 4). She describes instructional programs and practices she feels are at odds with SBRI as well as naming products and practices that she rates as better aligned with SBRI.

Over the past 60 years, the so-called reading wars have pushed the nature of effective reading instruction into the political realm. While those advocating whole language approaches were in the ascendancy a couple decades ago, the phonics adherents have had the most political success of late, often preventing teachers and schools of education from keeping whole language approaches in their tool boxes. Until recently, these “reading wars” have

“appeared to have more life in the public and professional press than in our schools,” according to David Pearson, dean of the College of Education at the University of California, Berkeley and formerly director of two federally funded national reading research centers.<sup>3</sup> The battles today, however, are taking place in the schools as the result of the federal “Reading First” initiative, part of the No Child Left Behind Act (NCLB). Pearson has also noted that, because of the level of surveillance that has often accompanied the adoption of the so-called SBRI curriculum products, teachers today are too often looking over their shoulders rather than into the eyes of the children they are teaching.<sup>4</sup>

SBRI, part of NCLB’s Reading First initiative, is the national vehicle for improving reading education and achievement. Congress mandated SBRI, but it did so only as a general concept in an attempt to raise reading achievement generally and to close the achievement gaps that have persisted among various sub-groups. The details of SBRI, however, were largely left to the regulation writers in the U.S. Department of Education, and the very definition of SBRI set forth in those regulations continues to be contested. This dispute is now playing out in most schools throughout the U.S.

Moats makes the following claims: 1) Systematic phonics instruction should be uncontested as the “scientific” method of teaching reading; and 2) Many products now mar-

keted as SBRI fail to include systematic phonics and other features that she contends are essential aspects of SBRI. This purported failure is then causally linked to continuing problems in reading achievement.

## **II. THE REPORT'S FINDINGS AND CONCLUSIONS**

Moats identifies a number of instructional practices as common in American classrooms while also "scientifically untenable" (p. 4). Further, she identifies several instructional programs or models "that may pay lip service to reading science, but fail to incorporate the content and instructional methods proven to work best with students learning to read" (p. 4). She then identifies several other programs or models that do meet, in her view, the essential criteria of SBRI.

Moats provides several lists of instructional practices and design features of curriculum materials that should (and should not) be found in classrooms using SBRI. Many of the items on the "Should be included" list are not supported by the available research, while many of the items on the "Not to be included" list are well-supported by the research (see the discussion of research literature, below). This aspect of the report is particularly problematic for one key reason: for most of the features that Moats lists (and for many of the specific assertions she makes throughout the report), she provides no citations to research. In addition, in those few instances when research reports are cited, Moats often exaggerates the actual findings. For instance, and as discussed further below, she does not accurately describe the findings of the

NRP or the benefits of explicit grammar instruction.

## **III. THE REPORT'S RATIONALES FOR ITS FINDINGS AND CONCLUSIONS**

The rationales Moats provides are primarily ideological (and, as discussed below, seemingly connected to entrepreneurial goals), relying on exaggerated claims about what the research says about effective beginning-reading instruction. While the report is steeped in references concerning the difficulty of learning to read, the solutions offered primarily involve purchasing particular commercial curriculum products, including professional development packages.

## **IV. THE REPORT'S USE OF RESEARCH LITERATURE**

Moats appeals to the findings of the NRP to buttress her claims regarding the absolute necessity of providing beginning readers with systematic and explicit phonics instruction. There are several problematic aspects of relying on the findings of the NRP report to support assertions about what the research says.

The National Reading Panel was convened in 1999 by the National Institute of Child Health and Human Development and the U.S. Department of Education. The 14-member panel was made up of primarily experimental researchers, most with a focus on word-level processes. The resulting report included a number of recommendations on the teaching of reading, including the necessity of developing student proficiencies in

phonemic awareness, decoding, fluency, vocabulary, and comprehension.

Although the NRP contributed greatly to the ongoing scholarly discussion of early reading instruction, its approaches and conclusions have been seriously challenged on several grounds. Just as importantly, even if the conclusions are taken as gospel, they offer only minimal policy guidance.

Taking the second point first, the actual effect of systematic phonics instruction calculated by NRP is relatively small – smaller, for instance, than the effect of adding cooperative learning activities to classroom lessons.<sup>5</sup> This small effect size decreases even more if such systematic phonics instruction is compared to “as needed” or “embedded” phonics instruction.<sup>6</sup>

The reader should keep in mind that, as compared to code-emphasis (systematic phonics) instruction, meaning-emphasis (which Moats labels whole-language) instruction has broader goals, among them developing higher-order reading proficiencies and fostering life-long engagement in reading. The small effect sizes that the NRP observed for code-emphasis instruction therefore provide little useful policy guidance.

But subsequent reanalysis of the NRP approach calls even these small effect sizes into serious question. Camilli, Vargas and Yurecko<sup>7</sup> concluded that the methodology and procedures used by the NRP were not adequate for synthesizing the research literature on phonics instruction. They reanalyzed the NRP data using more appropriate meta-analytical methods and found that the already small ef-

fect size for systematic phonics was cut almost in half. Camilli, Wolfe and Smith<sup>8</sup> then looked even more carefully at the underlying studies, factoring in the intensity of phonics instruction and the intensity of other literacy instruction offered to the students, and found only a trivial and statistically insignificant effect size for systematic phonics instruction. In other words, when these researchers analyzed the 38 phonics studies the NRP selected, using a more appropriate and complex statistical approach, any advantage of systematic phonics over embedded phonics vanished.

This is not to say that teaching decoding is unnecessary — in fact, it is a very important instructional tool. But many methods are available that foster the development of good decoding skills — as opposed to the single method that Moats markets and argues for.

Moats would have the reader believe that the presence of systematic phonics lessons — explicit, scripted, sequential, and paced — has been found to be critical in fostering beginning reading development. But, in fact, what the NRP found is that systematic phonics provided a small benefit, primarily on reading lists of words and non-words. But as noted above, even those findings have been seriously challenged by subsequent analyses of the NRP data base. Further, Hammill and Swanson<sup>9</sup> concluded that even were one to accept the NRP analyses, there exists no practical difference in the reading achievement of children receiving systematic phonics and those receiving reading instruction without the phonics component. They demonstrated that 96 percent of the variance

in reading achievement was left unexplained in the NRP comparisons. Accordingly, they concluded that the NRP analyses demonstrated that, for all practical purposes, reading instruction with and without a systematic phonics component is roughly equally effective.

Before continuing on to Moats' other claim connected to the research literature, it should be noted that the studies reviewed by the NRP are now 10-20 years old. Additional studies have since been conducted, and they lend support to the policy conclusion that both code-emphasis and meaning-emphasis approaches should be in teachers' toolboxes.<sup>10</sup> This is, indeed, what the report of the non-partisan National Research Council recommended after its review of the research on how to improve American reading instruction.<sup>11</sup>

In a similar vein, Moats reports that many teachers lack expertise, especially expertise in linguistic aspects of learning to read. She cites several studies indicating this state of affairs and then goes on to recommend several routes for developing such expertise, including substantial investments in professional development opportunities. Moats fails to note, however, that in her own research she found no significant improvement in teaching quality or student achievement after providing teachers in two large urban school districts with two years of such professional development. In that article, she and her co-author concluded, "attendance in professional development courses did not translate to higher ratings of teacher effectiveness in the classroom."<sup>12</sup>

Moats, it should be noted, is the developer of an often-used professional development program focused on developing teacher linguistic expertise (*Linguistic Essentials for Teachers of Reading and Spelling*). The LETRS program as well as Moats' co-authored, 'Colleague in the Classroom: Interventions for DIBELS users' video series — neither of which Moats directly promotes in this paper, but both of which provide the type of professional development called for in *Whole Language High Jinks* — are marketed by her employer, SoprisWest, apparently giving Moats an indirect financial stake in many of this report's recommendations. From that perspective, the recommendations seem more self-serving than based in any rigorous research demonstrating positive effects of such efforts on teaching children to read.

The report provides negative reviews of several instructional models, but it ignores vast amounts of evidence contradicting the negative evaluations. Consider the Reading Recovery intervention program that Moats savages. This intervention has stimulated sufficient research (36 studies) that D'Agostino and Murphy, two researchers from the University of Chicago, were able to conduct a meta-analysis of that program's effects on reading achievement.<sup>13</sup> They found that when comparing the achievement of all students receiving Reading Recovery to control group students, the Reading Recovery students' gains were statistically significant on all measures, including standardized tests. The researchers concluded: "Reading Recovery was reaching its fundamental goal of in-

creasing the lowest performing first graders' reading and writing skills to levels comparable with their classroom peers."<sup>14</sup> This sort of research support stands in stark contrast to the products that Moats endorses, which have almost no published research to support their use.

Instead, Moats points to research supporting specific design features that also appear in the products she promotes, but even these features and research studies are outdated. As noted above, Moats seems to not have kept current on the more recent research.<sup>15</sup> It is as if a medical researcher were still promoting the broad advantages of hormone therapy for addressing the physical health of postmenopausal women, having failed to read the negative research findings of that approach that have appeared since 2001.

Moreover, her anecdotal claim that ReadWell somehow improved achievement in Montgomery, Alabama, such that 80 percent of 1<sup>st</sup> through 3<sup>rd</sup> graders were "testing on grade level," rings hollow, at best.<sup>16</sup> This is the sort of data that publishers have long used in an attempt to fool unwitting school personnel into believing there is evidence supporting their product. But this isn't hard science; it is a "current-status comparison" of the sort that the U.S. Department of Education rates as the lowest quality evidence.<sup>17</sup>

Indeed, according to the department, if a reading program is not supported by randomized, controlled trials or quasi-experimental studies, "one may conclude that the intervention is not supported by meaningful evidence."<sup>18</sup> Yet ReadWell has only Moats' anecdotal data presented in

this report, while the Four Blocks model that she criticizes has multiple non-experimental evaluation studies from multiple districts reporting improved standardized reading achievement data, published in peer-reviewed journals.<sup>19</sup> This reviewer was able to locate one published study reporting very mixed effects of ReadWell on the reading achievement of very small group (n=5) of pupils with learning disabilities, but that also was a non-experimental evaluation study.<sup>20</sup>

Moats also praises another SoprisWest product, an assessment tool, the Dynamic Indicators of Early Literacy Skills (DIBELS), and suggests that it is somehow scientifically supported. But there are no studies demonstrating that using DIBELS improves instruction or reading achievement. While the developers of DIBELS have provided several positive studies of its predictive validity, independent researchers have not been able to replicate those findings.<sup>21</sup> Pressley and his colleagues concluded that, "Based on available data, the fairest conclusion is that DIBELS mis-predicts reading performance on other assessments much of the time, and at best is a measure of who reads quickly without regard to whether the reader comprehends what is read."<sup>22</sup>

Finally, Moats also criticizes various research-based lesson features that foster comprehension (e.g., teacher modeling, discussion, student choice). These are some features of research-based, meaning-emphasis instruction. She suggests that these features are not supported by scientific evidence. Moats, however, fails to address the work of Guthrie and Humenick, who in 2004 reported re-

sults of a meta-analysis of research on effective classroom reading instruction, using reading comprehension achievement as the outcome. They reported positive effect sizes that were much larger than the small and contested effect size reported by the NRP for systematic phonics instruction. For allowing students the opportunity to choose at least some of the texts they read, they reported effect sizes almost three times as large as the NRP phonics effect size. For providing student with easy access to interesting texts, the effect size was four times as large.<sup>23</sup>

Pressley, Duke and Boling in 2004 summarized the research evidence indicating that effective comprehension instruction begins with teacher explanations and modeling of individual strategies. These explanations and models, according to these authors, should be followed by students practicing the strategies in small groups, by those students producing discussions filled with predictions based on prior knowledge, and by student reports of images formed during reading, generation of questions about the content of material read, and summaries. Pressley and his colleagues point out that these discussions are nothing like typical classroom discourse, in which the teacher asks a question, solicits responses from students, and evaluates the responses. Instead, in these most effective lessons the interactions are much more conversational, with students responding to other students' strategies, attempts and interpretations of text.<sup>24</sup>

## **V. THE REPORT'S METHODOLOGY**

The report offers no methodology in any traditional sense. It is primarily a promotional essay advocating a point of view and particular curriculum products. The only data reported are found in the anecdotal summary of the effects of one commercial curriculum product in one school district. But even those anecdotal data are suspect, given the limited description provided.

## **VI. VALIDITY OF THE FINDINGS AND CONCLUSIONS**

There are traces of recommendations that would be supported by the research in this report, but they were overwhelmed, for this reviewer, by the blatant promotion of commercial products and services. Roughly half of the commercial products that Moats touts as effective (ReadWell, DIBELS, Sound Partners, and Responsive Reading) are products or services that are sold by her employer, SoprisWest.

## **VII. THE REPORT'S USEFULNESS FOR GUIDANCE OF POLICY AND PRACTICE**

If an employee of a petroleum company produces a report claiming that the scientific evidence does not support the conclusion that human activity is affecting air quality in many urban areas, the report's merits should be considered, even given the report's likely bias. But if that employee makes claims that are unsupported by research and argues that anyone, researcher or not, who dis-

agrees is a romantic and unscientific tree-hugger, it would be appropriate for everyone who reads that report to do so with an appropriately skeptical eye. The same sort of skepticism is warranted in reading Moats' *Whole Language Hi-Jinks*.

That said, several of Moats' recommendations have merit. For instance, Moats is correct in her argument that good readers are good decoders. Also, Moats is correct that many teachers and administrators, including state education agency personnel, do not have sufficient expertise in the research on the effective teaching of reading. Strengthening teacher education and providing more available and more powerful professional development would be a good idea. But it is in the details — the sort of reading lessons that best foster the development of decoding proficien-

cies, and the content of such training — where it seems doubtful that Moats and this reviewer would agree on much.

Fifty years of research, mostly large-scale, federally funded studies, has demonstrated that commercial curriculum products are basically impotent in terms of improving teaching or learning. That is a broad condemnation, and any given product should be considered on its own merits, but sales pitches for those products should be taken with a large grain of salt.

Notwithstanding such warnings, policy makers should not lose hope. Research does, in fact, provide a good basis for improving the quality of reading education. But that research has to be read carefully, comprehensively, and fairly.



## NOTES & REFERENCES

- <sup>1</sup> Moats, L. (2007). *Whole language high jinks: How to tell when 'scientifically-based reading instruction' isn't*. Washington, DC: Thomas B. Fordham Institute.
- <sup>2</sup> National of Child Health and Human Development (2000), *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific literature on reading and its implications for reading instruction*. NIH publication no. 00-4754 (Washington, DC: Government Printing Office).
- <sup>3</sup> Pearson, P. D. (2004). The reading wars. *Educational Policy*, 18(1), 216-252, p. 16.
- <sup>4</sup> Pearson, P. D. (2003). The role of professional knowledge in reading reform. *Language Arts*, 81(1), 14-15.
- <sup>5</sup> Guthrie, J. T., & Humenick, N. M. (2004). Motivating students to read: Evidence for classroom practices that increase motivation and achievement. In P. McCardle & V. Chhabra (Eds.), *The voice of evidence in reading research*. (pp. 329-354). Baltimore: Paul Brookes Publishing.
- <sup>6</sup> Hammill, D. D., & Swanson, H. L. (2006). The National Reading Panel's meta-analysis of phonics instruction: Another point of view. *Elementary School Journal*, 107(1), 17-26.
- <sup>7</sup> Camilli, G., Vargas, S., & Yurecko, M. (2003). Teaching children to read: The fragile link between science and federal education policy. *Education Policy Analysis Archives*, 11(15), Retrieved, May 20, 2003 from: <http://epaa.asu.edu/epaa/v11n15/>
- <sup>8</sup> Camilli, G., Wolfe, P. M., & Smith, M. L. (2006). Meta-analysis and reading policy: Perspectives on teaching children to read. *Elementary School Journal*, 107(1), 27- 36.
- <sup>9</sup> Hammill, D. D., & Swanson, H. L. (2006). The National Reading Panel's meta-analysis of phonics instruction: Another point of view. *Elementary School Journal*, 107(1), 17-26.
- <sup>10</sup> Camilli, G., Wolfe, P. M., & Smith, M. L. (2006). Meta-analysis and reading policy: Perspectives on teaching children to read. *Elementary School Journal*, 107(1), 27- 36.
- Hammill, D. D., & Swanson, H. L. (2006). The National Reading Panel's meta-analysis of phonics instruction: Another point of view. *Elementary School Journal*, 107(1), 17-26.
- Guthrie, J. T., & Humenick, N. M. (2004). Motivating students to read: Evidence for classroom practices that increase motivation and achievement. In P. McCardle & V. Chhabra (Eds.), *The voice of evidence in reading research*. (pp. 329-354). Baltimore: Paul Brookes Publishing.
- Pressley, M., Duke, N. K., & Boling, E. C. (2004). The educational science and scientifically based instruction we need: Lessons from reading research and policymaking. *Harvard Educational Review*, 74(1), 30-61.
- <sup>11</sup> Snow, C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children: A report of the National Research Council*. Washington, DC: National Academy Press.
- <sup>12</sup> Foorman, B. R., & Moats, L. C. (2004). Conditions for sustaining research-based practices in early reading instruction. *Remedial and Special Education*, 25(1), 51-60., p. 57
- <sup>13</sup> D'Agostino, J. V., & Murphey, J. A. (2004), A meta-analysis of Reading Recovery in United States schools. *Educational Evaluation and Policy Analysis*, 26(1), 23-38.
- <sup>14</sup> D'Agostino, J. V., & Murphey, J. A. (2004), A meta-analysis of Reading Recovery in United States schools. *Educational Evaluation and Policy Analysis*, 26(1), 23-38, p. 35
- <sup>15</sup> Camilli, G., Wolfe, P. M., & Smith, M. L. (2006). Meta-analysis and reading policy: Perspectives on teaching children to read. *Elementary School Journal*, 107(1), 27- 36.

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- Hammill, D. D., & Swanson, H. L. (2006). The National Reading Panel's meta-analysis of phonics instruction: Another point of view. *Elementary School Journal*, 107(1), 17-26.
- Guthrie, J. T., & Humenick, N. M. (2004). Motivating students to read: Evidence for classroom practices that increase motivation and achievement. In P. McCardle & V. Chhabra (Eds.), *The voice of evidence in reading research*. (pp. 329-354). Baltimore: Paul Brookes Publishing.
- <sup>16</sup> The State of Alabama does not administer any standardized assessments of reading achievement until 3rd grade. Thus, it is unclear what data Moats refers to in claiming that student reading achievement has substantially improved in grades K-3. Moats never identifies what "reading test" results are being reported.
- <sup>17</sup> U.S. Dept. of Education (updated 2006, June 20). "Scientifically based research." Retrieved Feb. 8, 2007 from <http://www.ed.gov/nclb/methods/whatworks/research/index.html>.
- <sup>18</sup> U.S. Dept. of Education (updated 2004, Nov. 23). "Identifying and Implementing Educational Practices Supported By Rigorous Evidence: A User Friendly Guide." Retrieved Feb. 12, 2007, from [http://www.ed.gov/rschstat/research/pubs/rigorousetid/guide\\_pg3.html](http://www.ed.gov/rschstat/research/pubs/rigorousetid/guide_pg3.html)
- <sup>19</sup> Cunningham, P. M. (2007). High poverty schools that beat the odds. *Reading Teacher*, 60 (4), 382-385; Cunningham, P. M., Hall, D. P., & Defee, M. (1998). Nonability-grouped, multi-level instruction: Eight years later; *Reading Teacher*, 51(8), 652-674; Cunningham, P. M., & P., H. D. (1998). The four blocks: A balanced framework for literacy in primary classrooms. In K. Harris, S. Graham & D. Deshler (Eds.), *Teaching every child every day* (pp. 32-76). Cambridge, MA: Brookline Books.
- <sup>20</sup> Jitendra, A. K., Edwards, L. L., Starosta, K., Sacks, G., Jacobson, L. A., & Choutka, C. M. (2004). Early reading instruction for children with reading difficulties: Meeting the needs of diverse learners. *Journal of Learning Disabilities*, 37(5), 421-439.
- <sup>21</sup> Carlisle, J. F., Schilling, S. G., Scott, S. E., & Zeng, J. (2004). *Do fluency measures predict reading achievement? Results from the 2002-2003 school year in Michigan's Reading First schools*. (Technical report #1). Ann Arbor, MI: University of Michigan. Pressley, M., Hilden, K., & Shankland, R. (2005). *An evaluation of end-of-grade 3 dynamic indicators of basic early literacy skills (DIBELS): Speed reading without comprehension, predicting little*. East Lansing, MI: Literacy Achievement Research Center, Michigan State University.
- <sup>22</sup> Pressley, M., Hilden, K., & Shankland, R. (2005). *An evaluation of end-of-grade 3 dynamic indicators of basic early literacy skills (DIBELS): Speed reading without comprehension, predicting little*. East Lansing, MI: Literacy Achievement Research Center, Michigan State University., p. 1
- <sup>23</sup> Guthrie, J. T., & Humenick, N. M. (2004). Motivating students to read: Evidence for classroom practices that increase motivation and achievement. In P. McCardle & V. Chhabra (Eds.), *The voice of evidence in reading research*. (pp. 329-354). Baltimore: Paul Brookes Publishing.
- <sup>24</sup> Pressley, M., Duke, N. K., & Boling, E. C. (2004). The educational science and scientifically based instruction we need: Lessons from reading research and policymaking. *Harvard Educational Review*, 74(1), 30-61.
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The Think Tank Review Project is made possible by funding from the Great Lakes Center for Education Research and Practice.

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SUGGESTED CITATION:

Allington, R. (2007). *Review of “Whole Language High Jinks: How to Tell When ‘Scientifically-based reading instruction’ isn’t.”* Boulder and Tempe: Education and the Public Interest Center & Education Policy Research Unit. Retrieved [date] from <http://epicpolicy.org/thinktank/review-whole-language-high-jinks-how-tell-when-scientifically-based-reading-instruction-is>