What Evidence Says About Reading Recovery

Executive Summary

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Authorship

This report is written by members of the North American Trainers Group, an organization which includes researchers and academics from Reading Recovery's 23 university training centers in the United States. It was published by the Reading Recovery Council of North America, a not-for-profit organization with the mission of making Reading Recovery available to every first-grade child who needs its support to learn to read and write.

For the Full Report

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EXECUTIVE SUMMARY

In May 2002, a letter criticizing Reading Recovery was widely distributed to members of Congress and the education community via the Internet. Although the letter purports to be an academic debate, its motivation appears to be political. The letter was released as states and local school districts were developing budgets and federal grant applications. The letter builds a distorted case based on flawed research and selective reporting of Reading Recovery studies.

In the national debate about scientifically based research and accountability, Reading Recovery is a surprising target because no program is more accountable and has a stronger scientific base than Reading Recovery. Reading Recovery is a short-term intervention for the lowest-achieving children in first grade. Children meet individually with a specially trained teacher for 30 minutes daily for 12 to 20 weeks. Children are tested before entering Reading Recovery to assure that they are the lowest-achieving readers in their class. They are also tested after their lessons are discontinued and at the end of first grade. The outcome of their lessons is compared with a random sample of their peers. Results are reported on school, district, and national levels.

Cumulative 17-year results show that in the United States, 60% of all children served can read at class average after their lessons, and 81% of children who have the full series of lessons can read at class average. No other intervention in the United States has such an extensive database and such strong accountability. More than one million children have been served in Reading Recovery since it came to the United States in 1984 through a team of researchers at The Ohio State University. Reading Recovery's not-for-profit network connects 23 universities, 3,293 school districts, Department of Defense Schools, and 10,622 elementary schools in the United States alone (National Data Evaluation Center [NDEC], 2002; see pages 8–9 for a complete list of Reading Recovery university training centers). Reading Recovery is not only available for children struggling to learn to read in English: it has been reconstructed in Spanish, French, and Maori and is currently being reconstructed in other languages.

In Reading Recovery, children meet individually with a specially trained teacher for 30 minutes daily for 12 to 20 weeks.

The Internet letter chooses to ignore all of this easily available information in an attempt to undermine public confidence in Reading Recovery. In addition, the Internet letter reflects a broader public debate about the nature of scientific evidence in reading research and the relationship of federal policy to local school decision making. These issues are discussed more fully in a response letter signed by more than 200 academic leaders and researchers outside Reading Recovery. The

signers represent an international group of independent scholars and researchers who have studied language, literacy, and learning in many contexts. This letter, entitled "A Broader View of Evidence: Reading Recovery as an Example," makes the following key points:

- Public education dollars belong to citizens, not to a small group of researchers who have a particular point of view.
- A scientific stance requires a complete, evidence-based analysis of any educational program.
- Policy makers have the responsibility to consider evidence from a wide range of perspectives and validated research models.
- Responsibly and rigorously collected evaluation data provide legitimate evidence of program success.
- An early intervention program like Reading Recovery is part of a comprehensive literacy effort.

This report is written by Reading Recovery researchers and academics from Reading Recovery's university training centers in the United States and is a response to the four criticisms in the Internet letter.

1. Reading Recovery is highly successful with the lowest-performing first-grade students.

Research in peer-reviewed journals documents Reading Recovery's effectiveness (Center, Wheldall, Freeman, Outhred, & McNaught, 1995; Iversen & Tunmer, 1993; Pinnell, 1997; Pinnell, Lyons, DeFord, Bryk, & Seltzer, 1994; Sylva & Hurry, 1996; Wasik & Slavin, 1993). Objective critics acknowledge that Reading Recovery works: "Evidence firmly supports the conclusion that Reading Recovery does bring the learning of many children up to that of their average-achieving peers….It is clear that many children leave the program with well-developed reading strategies, including phonemic awareness and knowledge of spelling" (Shanahan & Barr, 1995, p. 989).

Many evaluation studies demonstrate that the majority of Reading Recovery students maintain and improve their gains in later grades. Several studies using widely accepted standardized measures or state assessment measures show strong results for Reading Recovery students (Askew et al., 2002; Brown, Denton, Kelly, & Neal, 1999; Pinnell, 1989; Rowe, 1995; Schmitt & Gregory, 2001).

Former Reading Recovery students, like all students, need good classroom teaching to continue their progress. Reading Recovery is a short-term safety net, an essential component in a school's comprehensive literacy program. Two studies in refereed journals reveal that Reading Recovery students experience gains in self-concept (Cohen, McDonnell, & Osborn, 1989; Rumbaugh & Brown, 2000).

Evidence supporting Reading Recovery's effectiveness not only appears in peer-reviewed journals. It is also evident in the evaluation data collected and reported annually by the National Data Evaluation Center located in the College of Education at The Ohio State University. The data allow local administrators and school boards to monitor children's results and to examine implementation data such as the number of lessons missed, reasons for missed lessons, and level of implementation in a school.

To advance their political agenda, the authors of the Internet letter selectively report and distort the limited set of experimental studies they present to their colleagues, politicians, and the public. The

clearest instance of this distortion is in their use of the Elbaum, Vaughn, and Moody (2000) meta-analysis. The letter states, "In fact, for the poorest readers, empirical synthesis of 'in-house' and independent studies indicates that Reading Recovery is not effective. In Elbaum et al. (2000), the gains for the poorest readers instructed by Reading Recovery were almost zero."

Why is this a distortion? It ignores the major finding of this meta-analysis that the effect of Reading Recovery on student performance was large and significant. The Elbaum et al. (2000) study states, "For Reading Recovery interventions, effects for students identified as discontinued were substantial, whereas effects for students identified as not discontinued were not significantly different from zero" (p. 605). The Internet letter emphasizes the small number of students who did not make progress while it ignores the fact that the majority of students made substantial progress. It also implies that the not-discontinued students were the ones with the lowest entry scores. This is not true. The interpretation of this information in the Internet letter seems biased.

2. Cost-effectiveness is a complex concept in education.

The Internet letter states that "Reading Recovery is not cost-effective because the developers require one-to-one interventions by highly trained teachers." It is inappropriate to label a program as expensive or not cost-effective without extensive research comparison with other programs that target the same student population and seek to achieve the same results. Both long- and short-term benefits must be considered in this type of research. Such studies are rare in medical research and almost nonexistent in educational studies.

By intervening early, Reading Recovery reduces referrals and placements in special education (NDEC, 2002), limits retention, and has demonstrated lasting effects. Retention and special education referral each have a substantial price tag. The local costs of providing Reading Recovery services for 12 to 20 weeks are substantially less than special education and retention costs, particularly when the majority of Reading Recovery children sustain and improve their literacy learning gains in subsequent years of primary education (Brown et al., 1999; Schmitt & Gregory, 2001).

Authors of the Internet letter base their recommendations on inadequate research. The 2000 meta-analysis by Elbaum, Vaughn, and Moody is again cited. A closer look at the meta-analysis reveals that evidence is based on an unpublished doctoral

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dissertation (Evans, 1996) and an unpublished master's thesis (Acalin, 1995). Evans' doctoral dissertation supporting the effectiveness of group instruction is based on a very small sample of eight children: four randomly assigned to Reading Recovery and four assigned to a small group intervention. The Reading Recovery teacher studied in the dissertation was in the first months of the training year and had not recently taught primary-grade students. Evidence of equivalence for the two groups was lacking at pre-test.

Evidence from the Acalin master's thesis is even more suspect. Reading Recovery lessons were not even delivered by a Reading Recovery teacher, but by special education teachers who had not participated in Reading Recovery training. Furthermore, although Reading Recovery is a first-grade

intervention, Acalin provided instruction to 66 subjects in first through fourth grades. Only eight of the children were in first grade, with four assigned to Reading Recovery and four to Project Read.

In addition to the two studies in Elbaum, the Internet letter cites another unpublished doctoral dissertation (Iversen, 1997) as support for group intervention. Iversen claims to compare Reading Recovery with an instructional intervention for groups of two. The Reading Recovery program, however, was not standard with regard to training, screening and selection procedures, or teaching procedures. Design and methodological issues also raise numerous questions. Therefore, it would be inappropriate to draw any conclusions about Reading Recovery from the data presented.

Even casual consumers of scientific research would wonder why the Evans and Acalin studies were considered to have met criteria for inclusion in a meta-analysis that purports to follow, in the authors' own words, "best practices for research synthesis" (Elbaum et al., 2000, p. 606).

Studies cited by Elbaum and her colleagues provide virtually no evidence to support a change from one-to-one to small group instruction for the lowest-achieving first graders. The suggestions for Reading Recovery to change from one-to-one instruction is especially weak because there is documented evidence of success with hundreds of thousands of the lowest-performing first-grade students. Reading Recovery has also developed a design for dissemination and teacher training that allow these results to be replicated in diverse contexts across the United States and the world.

One-to-one tutoring is a central aspect of both the theory and design of Reading Recovery, and there is a body of research to support it. Extensive research would be needed to demonstrate the implications of a change from individual to small group instruction; however, researchers within and outside Reading Recovery should continue to study all possibilities. Research supports one-to-one tutoring and indicates that it may be essential for children who are at high risk (Bloom, 1984; Juel, 1991; Wasik & Slavin, 1993). The systematic nature of Reading Recovery instruction is based on a teacher's detailed assessment and analysis of a child's knowledge base and skills. The teaching is highly efficient because the teacher has this precise inventory of skills and strategies and is able to teach exactly what the child needs to know next.

3. Reading Recovery uses standard assessment measures.

Reading Recovery pre-tests and post-tests students using the measures published in *An Observation of Early Literacy Achievement* (Clay, 1993a/2002). The survey is a standard set of measures developed in research studies with qualities of sound assessment instruments having reliability, validity, and discrimination indices. It was developed to meet the unique need to assess emergent literacy in young children. The survey is comprised of six literacy tasks with established validity and reliability: letter identification, word test, concepts about print, writing vocabulary, hearing and recording sounds in words, and text reading. The Internet letter suggests a preference for norm-referenced tests that are widely available and commonly used in reading intervention research. Although these tests may yield valid comparisons for students who are already reading, they are not sensitive to variability in emerging knowledge and are not useful as baseline measures to assess change in early literacy. Some studies, however, have used standardized measures and state assessments to explore subsequent performance of former

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Reading Recovery children (Askew et al., 2002; Brown et al., 1999; Schmitt & Gregory, 2001); they show that Reading Recovery children do in fact maintain and improve their gains.

4. Change is an integral part of the Reading Recovery design.

Reading Recovery has built-in mechanisms for change. The central program document is *Reading Recovery: A Guidebook for Teachers in Training* (Clay, 1993b). Originally published as *Early Detection of Reading Difficulties* (1979/1985), it was thoroughly revised and retitled in 1993. The *Guidebook* reveals significant additions over years of development including:

- more intensive attention to and detailed description of the role of phonemic awareness;
- explicit directions for teachers in helping children use letter-sound relationships and phonics;
- more deliberate focus on comprehension strategies during the reading of a new book;
- differentiation between the way the teacher supports children during the reading of a new text and the role of familiar reading; and
- more information on how to teach for fluency and phrasing.

In addition to changes reflected in the *Guidebook*, Reading Recovery uses results from the National Data Evaluation Center to analyze and guide changes in implementation at the local, state, and national levels. Reading Recovery's extensive and continuing training for all personnel supports changes. Change is also evident in the standards and guidelines of the Reading Recovery Council of North America. All schools must adhere to these standards in order to be in compliance with the royalty-free trademark granted annually to participating schools by The Ohio State University. This trademark helps to ensure quality and consistency in Reading Recovery. Reading Recovery is a not-for-profit partnership of universities and local school districts.

The Internet letter recommends explicit instruction in phonics and phonemic awareness and suggests that Reading Recovery ignores these important instructional components. Any astute observer of a Reading Recovery lesson would recognize the explicit teaching of letters, sounds, and words. In Reading Recovery, children are shown how to use letter-sound relationships to solve words in reading and writing and how to use structural analysis of words and to learn spelling patterns (Pinnell, 2000). A study by Stahl, Stahl, and McKenna (1999) demonstrates that Reading Recovery students do in fact perform well on standardized tests of phonemic awareness and phonological coding.

One academic researcher studying a wide range of programs made the following observation about Reading Recovery: "The

importance of phonological and linguistic awareness is also explicitly recognized" (Adams, 1990, p. 420) and went on to describe Reading Recovery as one of several programs that "are designed to develop thorough appreciation of phonics.…On the other hand, none of these programs treats phonics in a vacuum" (p. 421).

The Internet letter cites two studies to support its contention that Reading Recovery would improve with more explicit phonics. The first, a 1993 study by Iversen and Tunmer, recommended that Reading Recovery add explicit phonics and phonemic awareness. In fact, the modifications had already been made before this study was carried out. Iversen herself had been trained as a teacher leader in the early years of Reading Recovery training in New Zealand, but at the time of the study, she was no longer teaching Reading Recovery and was not attending continuing professional development to receive program updates. Thus, the Reading Recovery instruction provided in the study was out of date, even in 1993. Despite this shortcoming, results of the Iversen and Tunmer study indicated that both the traditional Reading Recovery group and the phonics-enhanced group outperformed a control group on all measures of phoneme deletion and phoneme segmentation. The group with increased emphasis on phonemic awareness had programs that were shorter than Iversen's *traditional* group. Interestingly, the increase in phonemic awareness and phonics that Iversen included in training of her *experimental* group had already been included in Reading Recovery programs around the world.

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The second study cited in the Internet letter in support of explicit phonics is by Morris, Tyner, and Perney (2000). This study looked at some alternative staffing, training, and instructional approaches to early intervention. Morris and his colleagues did place a greater emphasis on isolated word study, but they also modeled more than three-quarters of the lesson format on Reading Recovery. The results indicated that students who participated in their First Steps program made better progress than a matched group of low students in non-participating comparison schools. This study was not designed to compare results against Reading Recovery or to isolate the contribution of a particular form of word study in relation to other program components. The claim in the Internet letter that "the addition of an explicit component addressing spelling-to-sound patterns was highly effective" seems questionable given that First Steps students received tutoring for the entire school year, averaging 91 lessons per student.

In the debate about how to teach phonics, the authors of the Internet letter draw on a 1999 report of the Literacy Experts Group in New Zealand. The group recommended "greater emphasis on explicit instruction in phonological awareness and the use of spelling-to-sound patterns in recognizing unfamiliar words in text." In response to the Internet letter and this recommendation, a member of the Literacy Experts Group wrote:

> It would be regrettable if…[any of the] recommendations from the 1999 Literacy Experts Group was construed as meaning that this group was among those attacking Reading Recovery. Because it wasn't…Most striking however, is the clear message that most of this

> debate is about some researchers talking to some other researchers, with very little buy-in from the teachers who implement Reading Recovery, or those with experience of translating research findings into effective classroom programmes. And, there is a huge gulf between a research study and a programme that works in a classroom. This is one area where the four New Zealand signatories of the U.S. [Internet] letter are out-of-step with many other reading researchers and literacy educators in New Zealand. (Croft, 2002, pp. 2–3)

In summary, there is substantial scientific evidence to support Reading Recovery's effectiveness with lowest-performing first-grade students. Reading Recovery does not claim to be the only solution to the nation's reading problems, nor does it seek preferential treatment for funding under the No Child Left Behind Act. Rather, Reading Recovery seeks the right to be considered as an early intervention option for state and local educational authorities.

REFERENCES

Acalin, T. A. (1995). *A comparison of Reading Recovery to Project Read.* Unpublished master's thesis, California State University, Fullerton.

Adams, M. J. (1990). *Beginning to read: Thinking and learning about print.* Cambridge, MA: MIT Press.

Askew, B. J., Kaye, E., Frasier, D. F., Mobasher, M., Anderson, N., & Rodríguez, Y. (2002). Making a case for prevention in education. *Literacy Teaching and Learning: An International Journal of Early Reading and Writing, 6*(2), 43–73.

Bloom, B. (1984). The 2-sigma problem: The search for methods of group instruction as effective one-to-one tutoring. *Educational Researcher, 13,* 4–16.

Brown, W., Denton, E., Kelly, P., & Neal, J. (1999). Reading Recovery effectiveness: A five-year success story in San Luis Coastal Unified School District. *ERS Spectrum: Journal of School Research and Information, 17*(1), 3–12.

Center, Y., Wheldall, K., Freeman, L., Outhred, L., & McNaught, M. (1995). An experimental evaluation of Reading Recovery. *Reading Research Quarterly, 30,* 240–263.

Clay, M. M. (1979/1985). *Early detection of reading difficulties.* Portsmouth, NH: Heinemann.

Clay, M. M. (1993a/2002). *An observation survey of early literacy achievement.* Portsmouth, NH: Heinemann.

Clay, M. M. (1993b). *Reading Recovery: A guidebook for teachers in training.* Portsmouth, NH: Heinemann.

Cohen, S. G., McDonnell, G., & Osborn, B. (1989). Self-perceptions of at risk and high achieving readers: Beyond Reading Recovery achievement data. In S. McCormick & J. Zutell (Eds.), *Cognitive and social perspectives for literacy research and instruction: Thirty-eighth yearbook of the National Reading Conference* (pp. 117–122). Chicago, IL: National Reading Conference.

Croft, C. (2002, July 15). Reading Recovery and literacy experts group [Letter to the editor]. *The Education Weekly, 13*(506), 2–3.

Elbaum, B., Vaughn, S. M. T., & Moody, S. W. (2000). How effective are one-to-one tutoring programs in reading for elementary students at risk for reading failure: A meta-analysis of the intervention research. *Journal of Educational Psychology, 92*(4), 605–619.

Evans, T. L. P. (1996). *I can read deze books: A qualitative comparison of the Reading Recovery program and small-group intervention.* Unpublished doctoral dissertation, Auburn University, Auburn, Alabama.

Iversen, S. (1997). *Reading Recovery as a small group intervention.* Unpublished doctoral dissertation, Massey University, Palmerston North, New Zealand.

Iversen, S. J., & Tunmer, W. E. (1993). Phonological processing skills and the Reading Recovery program. *Journal of Educational Psychology, 85,* 112–126.

Juel, C. (1991). Cross-age tutoring between student athletes and at-risk children. *Reading Teacher, 45*(3), 178–186.

Morris, D., Tyner, B., & Perney, J. (2000). Early Steps: Replicating the effects of a first-grade reading intervention program. *Journal of Educational Psychology, 92,* 681–693.

National Data Evaluation Center. (2002). *Reading Recovery and Descubriendo la Lectura national report 2000–2001.* Columbus, OH: The Ohio State University.

Pinnell, G. S. (1989). Reading Recovery: Helping at-risk children learn to read. *The Elementary School Journal, 90,* 161–183.

Pinnell, G. S. (1997). Reading Recovery: A review of research. In J. Squire, J. Flood, & D. Lapp (Eds.), *Handbook of research on teaching literacy through the communicative and visual arts* (pp. 638–654). New York: Macmillan Publishing.

Pinnell, G. S. (2000). *Reading Recovery: An analysis of a research-based reading intervention.* Columbus, OH: Reading Recovery Council of North America.

Pinnell, G. S., Lyons, C. A., DeFord, D. E., Bryk, A., & Seltzer, N. (1994). Comparing instructional models for the literacy education of high risk first graders. *Reading Research Quarterly, 29,* 8–39.

Rowe, K. J. (1995). Factors affecting students' progress in reading: Key findings from a longitudinal study. *Literacy, Teaching and Learning: An International Journal of Early Literacy, 1*(2), 57–110.

Rumbaugh, W., & Brown, C. (2000). The impact of Reading Recovery participation on student's self-concepts. *Reading Psychology, 21,* 13–30.

Schmitt, M. C., & Gregory, A. E. (2001, December). *The impact of early interventions: Where are the children now?* Paper presented at the annual meeting of the National Reading Conference, San Antonio, TX.

Shanahan, T., & Barr, R. (1995). A synthesis of research on Reading Recovery. *Reading Research Quarterly, 30,* 958–996.

Stahl, K. A. D., Stahl, S., & McKenna, M. C. (1999). The development of phonological awareness and orthographic processing in Reading Recovery. *Literacy Teaching and Learning: An International Journal of Early Literacy, 4(*1) 27–42.

Sylva, K., & Hurry, J. (1996). Early intervention in children with reading difficulties: An evaluation of Reading Recovery and a phonological training. *Literacy, Teaching, and Learning: An International Journal of Early Literacy, 2*(2), 49–68.

Wasik, B. A., & Slavin, R. E. (1993). Preventing early reading failure with one-to-one tutoring: A review of five programs. *Reading Research Quarterly, 28,* 179–200.

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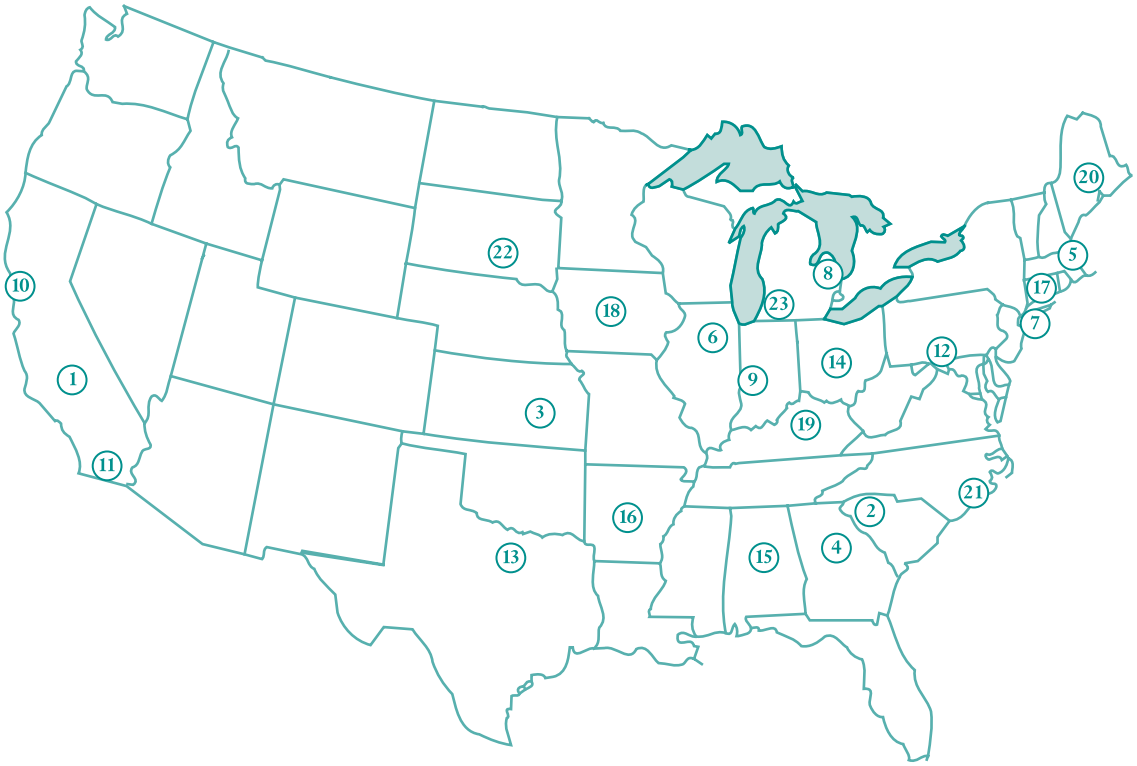

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