

## **The Effectiveness of Early-Intervention Tutoring Programs — When is a Research Brief Too Brief?**

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The ASCD research brief published on April 26, 2005, and revised on May 12, 2005, set out to answer the question, “How effective are tutoring programs for increasing the reading performance of at-risk students?” The brief concludes, “one-on-one tutoring, led by trained adults, can have a significant positive effect on student reading, particularly for younger students.” They reach this conclusion while leaving serious doubts about the effectiveness of “the most widespread reading tutoring intervention in the United States” – Reading Recovery (The Details, paragraph 1). I am writing this slightly less brief analysis of the research literature to eliminate these doubts and address distortions of the research evidence that appear in the revised brief.

The editors based their research brief on an article by Elbaum, Vaughn, Hughes and Moody (2000) that reports a meta-analysis of intervention research. The doubts about Reading Recovery arose in a revised version of the brief that appeared on May 12, 2005. This revision incorporated changes based on concerns expressed by the authors of the meta-analysis (see Editor’s Note). In the next few paragraphs, I examine the nature of these changes and the research evidence related to each statement.

### **‘Revising’ the Evidence**

The original brief said, “When compared with other one-on-one tutoring programs, Reading Recovery was shown to be a much stronger intervention.” This was based on a statement in Elbaum et al. (2000) that the “mean weighted effect size for the Reading Recovery interventions ( $d = 0.66$ ) was significantly higher than that for the other matched interventions, ( $d = 0.29$ )” (p. 615). Despite evidence to support this statement, in the revised research brief this statement no longer appears.

Instead the revised version reports, “When they analyzed only interventions delivered by teachers, the researchers found no statistically significant difference in mean weighted effect size for Reading Recovery interventions versus other interventions”(The Details, paragraph 3). This result is reported in Elbaum et al. (2000) as, “When only interventions delivered by teachers were considered, the mean weighted effect size for Reading Recovery interventions ( $d = 0.47$ ) was higher than that for other interventions ( $d = 0.28$ ), but the difference was not statistically reliable...” (p. 615). This is a much more positive result for Reading Recovery than the revised statement implies, especially when you consider that the other interventions mentioned are those effective first through third grade interventions recommended in the research brief.

### **Distorting the Evidence to Question Reading Recovery Effectiveness**

The problem in this revised brief is not that the editors allowed the authors of the meta-analysis to clarify the interpretation of their study, but that those authors have consistently tried to distort their analysis and interpretation to disparage the effectiveness

of Reading Recovery. This is illustrated in the revised “caveat” that added two final sentences suggesting the effect-size estimates for students receiving Reading Recovery might be inflated because of methodological issues in this research. Such a point could be appropriate if Elbaum et al. (2000) had commented on methodological issues in any of the other studies they included in the meta-analysis, but they didn’t. They singled out studies that show a positive effect of Reading Recovery for this type of critique.

This lack of critical analysis of other studies included in the Elbaum et al. (2000) paper is not because those studies had high quality methodology. They used two unpublished theses (Acalin, 1995; Evans, 1996) to make a claim that small group instruction might be as effective as the one-to-one Reading Recovery intervention. The methodology used in these studies (see *What evidence says about Reading Recovery*, 2002) is so questionable that Elbaum et al. don’t even list these studies in their own summary table of information on interventions included in the meta-analysis (p. 608). Each study had only 4 first-grade students participating in an intervention similar to Reading Recovery. Based on this, Elbaum et al. managed to calculate effect sizes and not surprisingly, given the small sample size and other methodological issues, found no difference compared to some form of small group intervention. Despite the questionable nature of this analysis and ignoring several high quality studies included in their meta-analysis that show Reading Recovery to be superior to small group instruction (Iverson & Tunmer, 1993; Pinnell, Lyons, DeFord, Bryk, & Seltzer, 1994), Elbaum et al. devote a separate section in their article to this unwarranted claim (Reading Recovery Versus Small-Group Intervention, p. 615).

In addition, Elbaum et al. (2000) do not question the retrospective matching procedure used in the only study in their sample, Chapman, Tunmer and Prochnow (2001), that reported large negative effect sizes for Reading Recovery (the Elbaum et al. meta-analysis cites two preliminary reports of the research in this article). The marked discrepancy of this one study from all the others on Reading Recovery should signal the need for a close methodological review. The Institute for Education Science (Coalition for Evidence-Based Policy, 2003) specifically cautions against erroneous conclusions based on such matching studies, particularly when their outcomes conflict with findings based on randomized experiments. A critique of the matching procedure used in Chapman et al. and an alternative view of the efficiency and effectiveness of Reading Recovery based on a randomized experimental study can be found in my recent article (Schwartz, 2005).

### **A More Objective View of the Research Evidence**

A more recent, objectively interpreted meta-analysis of research on Reading Recovery (D’Agostino & Murphy, 2004) concluded that Reading Recovery students scored significantly higher than similar initially low students on both program and standardized measures. This is the critical result for school administrators, teachers, and parents who are planning policy. Further, D’Agostino & Murphy (2004) report finding “no evidence suggesting that prior observed effects could be explained completely by factors resulting from methodological flaws” (p. 23). How much effect does Reading Recovery have on the literacy learning of the most at-risk first grade children? The 0.66 average effect size for experimental studies of Reading Recovery reported in Elbaum et al. (2000) is

significant and large. Further, the gains students show in these experimental studies are supported by the evaluation data that Reading Recovery reports on the approximately 140,000 students served in the program each year (Gómez-Bellengé & Rodgers, 2004).

### **Research Based Conclusions**

The question raised in this research brief is important for educational policy and the literacy learning of our nation's children. A slightly less brief analysis of the evidence provides the following answers:

- The scientific evidence indicates that Reading Recovery is an effective literacy intervention for the most at-risk first-grade children.
- Reading Recovery is at least as effective as any other one-on-one intervention in the research literature for primary literacy, and more effective than other early interventions for at-risk first-grade students.
- There is no research evidence to indicate that small group instruction can produce the same positive gains for these children.
- Unlike most research interventions, Reading Recovery has a dissemination and professional development model that makes it available to districts across the United States. Published, national evaluation data (Gómez-Bellengé & Rodgers, 2004) demonstrates that this system enables urban, rural and suburban districts to achieve the results shown in experimental studies (Schwartz, 2005).

The research evidence supports Richard Allington's (2005) conclusion in his column as president of the International Reading Association, "Struggling readers benefit enormously from access to tutoring. In fact, the evidence on this is so clear that it is one of only two research findings that have been included to date on the U. S. Department of Education's list of 'Gold Standard' findings ([www.ed.gov](http://www.ed.gov)). Last month, a meta-analysis of 36 studies of Reading Recovery—an expert tutoring intervention—was published in the research journal, *Educational Evaluation and Policy Analysis*, showing strikingly positive effects on reading achievement" (p. 3).

If you objectively examine the research evidence, I'm sure you will agree that Reading Recovery works.

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