**Reading Recovery**

Reading Recovery® is a short-term tutoring intervention intended to serve the lowest-achieving (bottom 20%) first-grade students. The goals of Reading Recovery® are to promote literacy skills, reduce the number of first-grade students who are struggling to read, and prevent long-term reading difficulties.

Reading Recovery® supplements classroom teaching with one-to-one tutoring sessions, generally conducted as pull-out sessions during the school day. Tutoring, which is conducted by trained Reading Recovery® teachers, takes place daily for 30 minutes over 12–20 weeks.

### Program Description

Reading Recovery® is a short-term tutoring intervention intended to serve the lowest-achieving (bottom 20%) first-grade students. The goals of Reading Recovery® are to promote literacy skills, reduce the number of first-grade students who are struggling to read, and prevent long-term reading difficulties.

### Research

Four studies of Reading Recovery® meet What Works Clearinghouse (WWC) evidence standards, and one study meets WWC evidence standards with reservations. The five studies included approximately 700 first-grade students in more than 46 schools across the United States. Based on these five studies, the WWC considers the extent of evidence for Reading Recovery® to be medium to large for alphabetics, small for fluency and comprehension, and medium to large for general reading achievement.

### Effectiveness

Reading Recovery® was found to have positive effects on alphabetics and general reading achievement and potentially positive effects on fluency and comprehension.

<table>
<thead>
<tr>
<th></th>
<th>Alphabetics</th>
<th>Fluency</th>
<th>Comprehension</th>
<th>General reading achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rating of effectiveness</strong></td>
<td>Positive effects</td>
<td>Potentially positive effects</td>
<td>Potentially positive effects</td>
<td>Positive effects</td>
</tr>
<tr>
<td><strong>Improvement index</strong></td>
<td>Average: +34 percentile points</td>
<td>Average: +46 percentile points</td>
<td>Average: +14 percentile points</td>
<td>Average: +32 percentile points</td>
</tr>
<tr>
<td></td>
<td>Range: −10 to +50 percentile points</td>
<td>Range: +32 to +49 percentile points</td>
<td>Range: +6 to +21 percentile points</td>
<td>Range: −5 to +50 percentile points</td>
</tr>
</tbody>
</table>

1. This report has been updated to include reviews of 28 studies that have been released since 2005. Of the additional studies, 16 were not within the scope of the protocol and 12 were within the scope of the protocol but did not meet evidence standards. A complete list and disposition of all studies reviewed are provided in the references.

2. The descriptive information for this program was obtained from a publicly available source: the program’s website (http://www.readingrecovery.org, downloaded September 2008). The WWC requests developers to review the program description sections for accuracy from their perspective. Further verification of the accuracy of the descriptive information for this program is beyond the scope of this review.

3. The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available.

4. These numbers show the average and range of student-level improvement indices for all findings across the studies.
**Additional program information**

**Developer and contact**

Developed by Marie M. Clay, Ph.D., University of Auckland, New Zealand. Distributed through more than 20 university training centers in the United States and supported by the Reading Recovery® Council of North America (RRCNA). Address: 400 West Wilson Bridge Road, Suite 250, Worthington, OH 43085-5218. Email: jjohnson@readingrecovery.org, Web: http://www.readingrecovery.org/. Telephone: (614) 310-7323.

**Scope of use**

Reading Recovery® was developed in the mid-1970s by Dr. Clay, who first tested the program in New Zealand. According to the RRCNA, more than 1.8 million first graders in 48 states and the Department of Defense Dependents Schools have been served in the United States since Reading Recovery® was introduced in 1984. Reading Recovery® is also used in New Zealand, Australia, Canada, and the United Kingdom.

**Teaching**

According to the Reading Recovery® website, lessons incorporate several components of reading instruction, including phonemic awareness, phonics, vocabulary, fluency, comprehension, writing, motivation, oral language, and independence. Each Reading Recovery® lesson consists of reading familiar and novel stories, manipulating letters and words, and writing and assembling stories. Lessons are interactive between teacher and student, with the teacher carefully monitoring each child’s reading behavior. Reading Recovery® lessons are discontinued when children demonstrate the ability to read consistently at the average level for their grade—between weeks 12 and 20 of the program. Those who make progress but do not reach average classroom performance after 20 weeks are referred for further evaluation and a plan for future action. Teacher training includes a one-year, university-based training program and ongoing professional development.

**Cost**

Reading Recovery® is available on a nonprofit, no royalty basis. Because Reading Recovery® in the United States is a collaboration between universities and school districts, costs include tuition for initial training and continuing professional development. To establish a Reading Recovery® site—composed of multiple schools in a district or group of districts—a teacher leader must be trained first. Start-up costs include salary, university tuition for the Reading Recovery® coursework, and books and materials. Each site must also equip a room with a one-way mirror and sound system to provide subsequent training for the teachers. Ongoing costs include a portion of the teachers’ salaries and benefits. The typical school with Reading Recovery® assigns these specially trained teachers to work a half day in Reading Recovery® and the remaining half day in other capacities, such as teaching small literacy groups or kindergarten. Across the 2006–07 school year, the average US Reading Recovery® teacher worked with eight Reading Recovery® students and approximately 42 additional students. Ongoing salary and benefit costs for the Reading Recovery® teachers should be assigned to the part of the day that they work with Reading Recovery® students. In 2006, the cost of program materials was approximately $100 per student served (calculated by the RRCNA as an average over the five years, 2002–06). Sites pay an annual data evaluation fee of $350 per site plus $45 per Reading Recovery® teacher. Related ongoing costs include professional development for both teacher leaders and teachers, books and materials for lessons, student program materials, and data evaluation fees. Sites implementing the program also pay annual technical support fees, which vary by the university that provides the Reading Recovery® training.
A total of 106 studies reviewed by the WWC investigated the effects of Reading Recovery®. Four studies (Baenen, Bernhole, Dulaney, & Banks, 1997; Pinnell, DeFord, & Lyons, 1988; Pinnell, Lyons, DeFord, Bryk, & Seltzer, 1994; and Schwartz, 2005) are randomized controlled trials that meet WWC evidence standards. One study (Iverson & Tunmer, 1993) is a quasi-experimental design that meets WWC evidence standards with reservations. The remaining 101 studies do not meet either WWC evidence standards or eligibility screens.

### Meets evidence standards

**Baenen et al. (1997)** was a randomized controlled trial that focused on first-grade students from Wake County, NC. The WWC review focuses on the outcomes of students who qualified for and were randomly assigned to either the Reading Recovery® intervention or a comparison group. From an original sample size of 168, outcomes were assessed at three time points: end of first grade (n = 147), end of second grade (n = 147), and end of third grade (n = 127). Although the WWC used only the results at the end of first grade to determine the intervention rating, information on the additional findings can be found in Appendix A4.4.

**Pinnell et al. (1988)** was a randomized controlled trial. The study sample was composed of first-grade students in 14 schools in Columbus, OH. Students were randomly assigned to an intervention group, which received Reading Recovery® in addition to its regular classroom instruction (n = 38), or to a control group, which received an alternate compensatory program (n = 53). This comparison meets WWC evidence standards.

**Pinnell et al. (1994)** was a randomized controlled trial that randomly assigned 10 low-achieving first-grade students in each of 10 Ohio schools. The WWC review focuses only on the eight schools that successfully implemented randomization for the intervention (n = 31) and comparison (n = 48) conditions.

**Schwartz (2005)** was a randomized controlled trial of first-grade students from 14 states. The WWC focused on the comparison between 37 students across several schools who were randomly assigned to receive the intervention during the first half of the year, and 37 students who were randomly assigned to receive the intervention during the second half of the year. The groups were compared at midyear, before the comparison group had begun receiving Reading Recovery®.

### Meets evidence standards with reservations

**Iverson and Tunmer (1993)** was a quasi-experimental design study that included first-grade students from 30 school districts in Rhode Island. The study compared outcomes for students participating in Reading Recovery® (n = 32) with students in a comparison group who did not receive Reading Recovery®.

---

5. Because Reading Recovery® is designed to improve the reading skills of low-achieving first-grade readers, the appropriate comparison groups for determining the intervention’s effectiveness are similar low-achieving first-grade readers who did not receive Reading Recovery®. Many of the studies screened did not meet evidence standards because they used inappropriate comparison groups, such as higher-achieving first-grade readers, to draw conclusions about the effectiveness of the program.

6. A third group of students qualified for and received Reading Recovery® outside of regular classroom instruction, but these students were also taught by a Reading Recovery®–trained teacher when they were in their regular classroom (n = 96). Although this comparison met evidence standards with reservations, it was not considered in the intervention rating because it went beyond the standard delivery of the program. However, results are reported in Appendices A4.1–A4.3.

7. Although the original study included analyses of additional interventions implemented at additional schools, only the schools that randomly assigned students to Reading Recovery® or the comparison group were relevant to this review. For more details about the original study, see Appendix A1.3.

8. Assessments were also made at the end of the year, but they were not appropriate for the WWC’s analysis because by then both groups of low-achieving students had received the intervention. Additional comparison groups of low-average and high-average readers were not used by the WWC because these students were not eligible for Reading Recovery®.
Research (continued)

(n = 32), who were matched on the basis of pretest scores. The comparison group received standard small group, out-of-class support services.

Extant of evidence

The WWC categorizes the extent of evidence in each domain as small or medium to large (see the What Works Clearinghouse Extent of Evidence Categorization Scheme). The extent of evidence takes into account the number of studies and the total sample size across the studies that meet WWC evidence standards with or without reservations.

The WWC considers the extent of evidence for Reading Recovery® to be medium to large for alphabetics, small for fluency and comprehension, and medium to large for general reading achievement.

Effectiveness

Findings

The WWC review of interventions for beginning reading addresses student outcomes in four domains: alphabetics, fluency, comprehension, and general reading achievement. The studies included in this report cover all four domains. The findings below present the authors’ estimates and WWC-calculated estimates of the size and the statistical significance of the effects of Reading Recovery® on students.

For the four beginning reading domains, subtests of the Clay Observation Survey were used in some of the studies. The Clay Observation Survey was developed by Dr. Marie Clay, who also developed Reading Recovery®. Although there is no evidence of obvious overalignment between the measure and the intervention (intervention students receiving exposure to the measure during the course of treatment), it should be noted that the same person developed the intervention and the measure.

Alphabetics. Two studies examined the effects of Reading Recovery® on the phonemic awareness construct in the alphabetics domain. Schwartz (2005) reported no statistically significant effects for the phonemic awareness measures—a phoneme deletion task and the Yopp-Singer Phoneme Segmentation Test—but the effects on both measures were positive and considered substantively important based on WWC criteria (that is, at least 0.25). Iverson and Tunmer (1993) reported, and the WWC confirmed, statistically significant positive effects of the Reading Recovery® intervention on two phonemic awareness measures—the phoneme deletion task and the Yopp-Singer Phoneme Segmentation Test.

Three studies examined the effects of Reading Recovery® on the print awareness construct in the alphabetics domain. Pinnell, DeFord, and Lyons (1988) reported, and the WWC confirmed, a statistically significantly positive effect of Reading Recovery®

9. The study also included a third group of students (n = 32) who used a modified version of Reading Recovery®, which provided explicit instruction in letter-phoneme patterns instead of the letter identification segment. This group was also compared with the comparison group. Although this comparison meets evidence standards with reservations, it was not considered in the intervention rating because it went beyond the standard delivery of the program. However, results are reported in Appendices A4.1 and A4.3.

10. The Extent of Evidence Categorization was developed to tell readers how much evidence was used to determine the intervention rating, focusing on the number and size of studies. Additional factors associated with a related concept—external validity, such as the students’ demographics and the types of settings in which studies took place—are not taken into account for the categorization. Information about how the extent of evidence rating was determined for Reading Recovery® is in Appendix A6.

11. The level of statistical significance was reported by the study authors or, where necessary, calculated by the WWC to correct for clustering within classrooms or schools and for multiple comparisons. For an explanation, see the WWC Tutorial on Mismatch. For the formulas the WWC used to calculate the statistical significance, see Technical Details of WWC-Conducted Computations. In the cases of Baenen et al. (1997) and Schwartz (2005), no corrections for clustering or multiple comparisons were needed. In the cases of Iverson and Tunmer (1993), Pinnell et al. (1988), and Pinnell et al. (1994), corrections for clustering and multiple comparisons were needed, so the significance levels may differ from those reported in the original study.
on the Concepts About Print subtest of the Observation Survey of Early Literacy Achievement. Schwartz (2005) reported, and the WWC confirmed, a statistically significant positive effect of Reading Recovery® on the Concepts About Print subtest of the Observation Survey. Iverson and Tunmer (1993) found a statistically significant positive effect of Reading Recovery® on the Concepts About Print subtest of the Observation Survey. The significance of the effect was confirmed by the WWC.

Three studies examined the effects of Reading Recovery® on the letter knowledge construct in the alphabetics domain. Pinnell et al. (1988) did not find a statistically significant effect for Reading Recovery® on the Letter Identification subtest of the Observation Survey. Schwartz (2005) reported a statistically significant positive effect of Reading Recovery® on the Letter Identification subtest of the Observation Survey, but according to WWC criteria, this effect was not statistically significant or large enough to be considered substantively important.12 Iverson and Tunmer (1993) found, and the WWC confirmed, statistically significant positive effects of Reading Recovery® on the Letter Identification subtest of the Observation Survey.

Three studies examined the effects of Reading Recovery® on the phonics construct of the alphabetics domain. Pinnell et al. (1988) found a statistically significant positive effect on the Word Recognition subtest of the Observation Survey. In WWC calculations, there was no statistically significant effect, but the positive effect was large enough to be considered substantively important. Schwartz (2005) found, and the WWC confirmed, a statistically significant positive effect of Reading Recovery® on the Word Recognition subtest of the Observation Survey. Iverson and Tunmer (1993) found statistically significant positive effects of Reading Recovery® on the Dolch Word Recognition Test, the Word Recognition subtest of the Observation Survey, and a pseudoword decoding task. The significance of the effects was confirmed by the WWC.

In the fluency domain, one study with a strong design demonstrated statistically significant positive effects.

Comprehension. Two studies examined the effects of Reading Recovery® on the reading comprehension construct. Pinnell et al. (1988) found a positive and statistically significant effect of Reading Recovery® on the Reading Comprehension subtest of the Comprehensive Test of Basic Skills (CTBS). The significance of the effect was confirmed by the WWC. Schwartz (2005) reported no statistically significant effect of Reading Recovery® on the Degrees of Reading Power Test.

One study examined the effect of Reading Recovery® on the vocabulary construct of the comprehension domain. Pinnell et al. (1988) found, and the WWC confirmed, a positive and statistically significant effect of Reading Recovery® on the Reading Vocabulary subtest of the CTBS.

In the comprehension domain, there were two studies with strong designs. One study showed statistically significant positive effects, and the other study showed an indeterminate effect.

General reading achievement. Baenen et al. (1997) did not find a statistically significant effect of Reading Recovery® on grade retention. Pinnell et al. (1988) found, and the WWC confirmed, positive and statistically significant effects of Reading Recovery® on two subtests of the Observation Survey: Hearing and Recording Sounds in Words (Dictation) and Writing Vocabulary. Pinnell et al. (1994) found statistically significant positive effects of

12. In this case, the author did not control for pretest differences between groups; however, the WWC did account for pretest differences.
Effectiveness (continued)

Reading Recovery® on the Gates-MacGinitie Reading Test, the Dictation subtest of the Observation Survey, and the Woodcock Reading Mastery Test–Revised. The statistical significance of the effects was confirmed by the WWC. Schwartz (2005) and Iverson and Tunmer (1993) found, and the WWC confirmed, positive and statistically significant effects of Reading Recovery® on two subtests of the Observation Survey: Dictation and Writing Vocabulary.

In the general reading achievement domain, there were three studies with strong designs and statistically significant positive effects. One study had a strong design with indeterminate effects. One additional study meets WWC evidence standards with reservations and demonstrates statistically significant positive effects.

Rating of effectiveness

The WWC rates the effects of an intervention in a given outcome domain as positive, potentially positive, mixed, no discernible effects, potentially negative, or negative. The rating of effectiveness takes into account four factors: the quality of the research design, the statistical significance of the findings, the size of the difference between participants in the intervention condition and the comparison condition, and the consistency in findings across studies (see the WWC Intervention Rating Scheme).

Improvement index

The WWC computes an improvement index for each individual finding. In addition, within each outcome domain, the WWC computes an average improvement index for each study and an average improvement index across studies (see Technical Details of WWC-Conducted Computations). The improvement index represents the difference between the percentile rank of the average student in the intervention condition versus the percentile rank of the average student in the comparison condition. Unlike the rating of effectiveness, the improvement index is entirely based on the size of the effect, regardless of the statistical significance of the effect, the study design, or the analysis. The improvement index can take on values between −50 and +50, with positive numbers denoting favorable results.

The average improvement index for alphabetics is +34 percentile points across three studies, with a range of −10 to +50 percentile points. For fluency, the average improvement index is +46 percentile points, with a range of +32 to +49 percentile points across outcomes in one study. For comprehension, the average improvement index is +14 percentile points across two studies, with a range of +6 to +21 percentile points. For the general reading domain, the average improvement index was +32 percentile points across five studies, with a range of −5 to +50 percentile points.

Summary

The WWC reviewed 106 studies on Reading Recovery®. Four of these studies meet WWC evidence standards; one study meets WWC evidence standards with reservations; the remaining 101 studies do not meet either WWC evidence standards or eligibility screens. Based on the five studies, the WWC found positive effects in alphabetics and general reading achievement and potentially positive effects in fluency and comprehension. The conclusions presented in this report may change as new research emerges.

References

Meet WWC evidence standards


Additional Sources:

References (continued)

Paper presented at the annual meeting of the American Educational Research Association, Atlanta, GA.


Additional Sources:


Meets WWC evidence standards with reservations

Additional Source:

Studies that fall outside the Beginning Reading protocol or do not meet WWC evidence standards
Acalin, T. A. (1995). A comparison of Reading Recovery to Project READ. Masters Abstracts International, 33(06), 1660. (UMI No. 1361908) This study is ineligible for review because it does not disaggregate findings for the age or grade range specified in the protocol.
Askew, B. J., & Frasier, D. F. (1997). Sustained effects of Reading Recovery intervention on the cognitive behaviors of second grade children and the perceptions of their teachers. In S. L. Swartz & A. F. Klein (Eds.), Research in Reading Recovery (pp. 18–38). Portsmouth, NH: Heinemann. The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.
intervention and comparison groups are not shown to be equivalent at baseline.


**Additional sources:**


Center, Y., Freeman, L., & Robertson, G. (2001). The relative effect of a code-oriented and a meaning-oriented early literacy program on regular and low progress Australian students in year 1 classrooms which implement Reading Recovery. *International Journal of Disability, Development and Education, 48*(2), 207–322. The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.


Christman, M. S. (2003). An examination of the effects and costs of the Reading Recovery program in an urban school district. *Dissertation Abstracts International, 64*(08), 2824A. (UMI No. 3102259) The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.

References (continued)


Concha, J. S. (2005). *Reading Recovery children and early literacy development: Investigation into phonological awareness, orthographic knowledge, oral reading processing, and reading comprehension processing*. University of Maryland, College Park: Department of Curriculum and Instruction. The study is ineligible for review because it does not examine the effectiveness of an intervention.

Curtin, J. (1993). *The effectiveness of the Reading Recovery program on reading achievement*. Chicago: Chicago Public Schools. (ERIC Document Reproduction Service No. ED363863) The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.


Douëtil, J. (2004). *The long term effects of Reading Recovery on national curriculum tests at end of key stages 1 and 2*. London: Institute of Education. The study is ineligible for review because it does not use a comparison group.


for review because it is not a primary analysis of the effectiveness of an intervention.

Fraser, H., MacDougall, A., Pirrie, A., & Croxford, L. (2001). National evaluation of the early intervention program. KPMG and The University of Edinburgh. The study is ineligible for review because it does not use a comparison group.

Fullerton, S. K., & DeFord, D. E. (2001). Conversations before writing during Reading Recovery lessons: Negotiations or tug of war? Paper presented at the meeting of the National Reading Conference, Chicago. This study is ineligible for review because it does not use a comparison group.

Gilmer, V. B. (2003). Sustained success of former Reading Recovery students. Dissertation Abstracts International, 64(02), 444A. (UMI No. 3081577) The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.

Gómez-Bellengé, F. X., & Rodgers, E. M. (2004). Reading Recovery and Descubriendo la Lectura national report 2002–2003. Columbus: Ohio State University, College of Education, School of Teaching and Learning. The study does not meet evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.


Harrison, L. (2002). A study on the complementary effects of Reading Recovery and small group instruction for reversing reading failure. Research Summary No 102–103. Little Rock: University of Arkansas at Little Rock. This study is ineligible for review because it does not use a comparison group.

Hovest, C. M. (2000). An examination of the achievement of phonological skills for three groups participating in an early intervention program. Dissertation Abstracts International, 61(08), 3107A. (UMI No. 9982583) The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.

How effective is Reading Recovery? (2006). Literacy Today (46), 30–31. The study is ineligible for review because it does not use a comparison group.


LaFave, C. E. (1995). Impact of Reading Recovery on phonemic awareness. Dissertation Abstracts International, 56(07), 2621A. (UMI No. 9540370) The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.


Marina, B., & Gilman, D. A. (2003). Is Reading Recovery worth the cost? Vigo County, IN: Vigo County School Corporation. (ERIC Document Reproduction Service No. ED473957) The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.


McManus, D. A. (1999). A modified Reading Recovery program can be successful in a second grade Title I reading program. *Dissertation Abstracts International, 60*(10), 3597A. (UMI No. 9947733) This study is ineligible for review because it does not provide enough information about its design to assess whether it meets standards.


Murphy, J. A. (2003). An application of growth curve analysis: The evaluation of a reading intervention program. *Dissertation Abstracts International, 64*(12), 4358A. (UMI No. 3114448) The study does not meet evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.


the Schools, 39(6), 635–646. This study is ineligible for review because it does not include a student outcome.

Pinnell, G. S. (1997). An inquiry-based model for educating teachers of literacy. In S. L. Swartz & A. F. Klein (Eds.), Research in Reading Recovery (pp. 6–17). Portsmouth, NH: Heinemann. This study is ineligible for review because it does not include a student outcome.


Pollock, J. S. (1993). Final evaluation report: Reading Recovery program 1991–92. Columbus: Columbus Public Schools, Ohio Department of Program Evaluation. (ERIC Document Reproduction Service No. ED358440) This study is ineligible for review because it does not use a comparison group.


References (continued)

D. L. Schallert, C. M. Fairbanks, J. Worthy, & B. Maloch (Eds.), *Fiftieth yearbook of the National Reading Conference* (pp. 519–532). Chicago, IL: National Reading Conference. This study is ineligible for review because it does not include a student outcome.


Rodgers, E., Gómez-Bellengé, F., Wang, C., & Schulz, M. (2005). *Predicting the literacy achievement of struggling readers: Does intervening early make a difference.* Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec. The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.

Roehrig, A. D., Pressley, M., & Sloup, M. (2001). Reading strategy instruction in regular primary-level classrooms by teachers trained in *Reading Recovery.* *Reading & Writing Quarterly,* 17(4), 323–348. This study is ineligible for review because it does not include a student outcome.


Rowe, K. J. (1995). Factors affecting children’s progress in reading: Key findings from a longitudinal study. *Literacy Teaching and Learning, 1*(2), 57–110. The study is ineligible for review because it does not examine the effectiveness of an intervention.


Schmitt, M. C. (2001). The development of children’s strategic processing in *Reading Recovery.* *Reading Psychology,* 22, 129–151. This study is ineligible for review because it does not include an outcome within a domain specified in the protocol.

Schmitt, M. C. (2003). Metacognitive strategy knowledge: Comparison of former *Reading Recovery* children and their current classmates. *Literacy Teaching and Learning,* 7(1–2), 57–76. This study is ineligible for review because it does not include an outcome within a domain specified in the protocol.

Schmitt, M. C., & Gregory, A. E. (2001). *The impact of early intervention: Where are the children now?* Paper presented at the meeting of the National Reading Conference, San Antonio, TX. The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.


Shoulders, M. D. (2004). The long-term effectiveness of the *Reading Recovery program.* *Dissertation Abstracts International,* 65(03), 836A. (UMI No. 3127549) The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.

Simpkins, J. (1995). *Longitudinal study of Reading Recovery: School years 1990–91 through 1993–94.* Unpublished manuscript. The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.

Simpson, S. H. (1997). A principal’s perspective of the implementation of *Reading Recovery* in six metropolitan Nashville elementary schools. *Dissertation Abstracts International,* 58(08), 2948A. (UMI No. 9806596) The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.


Smith, N. (1994). *Reading Recovery data and observations from one Illinois site (Part II).* *Illinois Reading Council Journal,* 22(3), 29–46. The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.

Additional source:


Smith, P. E. (1994). *Reading Recovery* and children with English as a second language. *New Zealand Journal of Educational Studies,* 29(2), 141–155. The study does not meet WWC evidence standards because the intervention and comparison groups are not shown to be equivalent at baseline.


Swartz, S. L. (1999). *California Early Literacy Learning and Reading Recovery: Two innovative programs for teaching children*
References (continued)


Studies with disposition pending

None.