Reading Mastery

No studies of *Reading Mastery* that fall within the scope of the Beginning Reading review protocol meet What Works Clearinghouse (WWC) evidence standards. The lack of studies meeting WWC evidence standards means that, at this time, the WWC is unable to draw any conclusions based on research about the effectiveness or ineffectiveness of *Reading Mastery* on beginning readers in grades K–3. Additional research is needed to determine the effectiveness or ineffectiveness of this intervention.

**Program Description**

*Reading Mastery*, one of several curriculum components that constitute the *Direct Instruction* program from SRA/McGraw-Hill, is designed to provide systematic instruction in reading to students in grades K–6. *Reading Mastery*, which can be used as an intervention program for struggling readers, as a supplement to a core reading program, or as a stand-alone reading program, is available in three versions:

1. *Reading Mastery Classic* (for grades pre-K–3) aims to help beginning readers identify letter sounds, segment words into sounds, blend sounds into words, develop vocabulary, and begin to learn comprehension strategies.
2. *Reading Mastery Plus* (for grades K–6) has a language arts focus with an emphasis on reading, writing, spelling, and language.
3. *Reading Mastery Signature Edition* (for grades K–5) includes three strands: (a) a Reading strand that addresses phonemic awareness, phonics, word analysis, fluency, vocabulary, comprehension, spelling, decoding, and word recognition skills; (b) an Oral Language/Language Arts strand that addresses oral language, communication, and writing skills; and (c) a Literature strand that is designed to provide students with opportunities to read a variety of texts and to develop their vocabulary.

During the implementation of *Reading Mastery*, students are grouped with other students at a similar reading level, based on program placement tests. The program includes a continuous monitoring component.

A typical 30- to 45-minute *Reading Mastery* lesson includes seven to nine short activities that encompass multiple strands of content, such as phonemic awareness, letter–sound correspondence, sounding out words, word recognition, vocabulary, oral reading fluency, or comprehension. The teaching routine repeated throughout the curriculum is composed of the following steps: modeling new content, providing guided practice, and implementing individual practice and application. Lesson scripts act as a guide for teachers. Signals and group responses are used to keep students involved and on task and to control lesson pacing. The program typically spans 1 academic year.

This review of *Reading Mastery* for Beginning Reading focuses on students in grades K–3.

**Research**

The WWC identified 154 studies of *Reading Mastery* for beginning readers that were published or released between 1983 and 2012.

Thirty-one studies are within the scope of the Beginning Reading review protocol but do not meet WWC evidence standards.
• Thirteen studies used a quasi-experimental design that did not establish that the comparison group was comparable to the intervention group prior to the start of the intervention.
• Ten studies could not attribute the measures of the effects solely to Reading Mastery because the intervention was combined with another intervention, the effects were not reported separately for the intervention, or the intervention was not implemented as designed.
• Seven studies had only one unit assigned to the intervention condition or one unit assigned to the comparison condition.
• One study used a single-case design that did not have at least three attempts to demonstrate an intervention effect at three different points in time.

Seventy-six studies are out of the scope of the Beginning Reading review protocol because they have an ineligible study design.
• Sixty-one studies did not use a comparison group design, a regression discontinuity design, or a single-case design.
• Fifteen studies were literature reviews or meta-analyses.

Forty-seven studies are out of the scope of the Beginning Reading review protocol for reasons other than study design.
• Nineteen studies did not include students in grades K–3, as specified in the protocol.
• Eight studies included fewer than 50% general education students.
• Eight studies did not disaggregate findings for the age or grade range specified in the protocol.
• Seven studies did not examine the effectiveness of an intervention.
• Three studies did not include an outcome within a domain specified in the protocol.
• Two studies did not implement the intervention in a way that falls within the scope of the review because the intervention was bundled with other components.
References

Studies that do not meet WWC evidence standards


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Carlson, C. D., & Francis, D. J. (2002). Increasing the reading achievement of at-risk children through Direct Instruction: Evaluation of the Rodeo Institute for Teacher Excellence (RITE). *Journal of Direct Instruction*, 3(1), 29–50. The study does not meet WWC evidence standards because the measures of effectiveness cannot be attributed solely to the intervention—the intervention was combined with another intervention.


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**Additional source:**


**Studies that are ineligible for review using the Beginning Reading Evidence Review Protocol**

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**Additional source:**


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**Additional source:**
**Endnotes**

* On March 3, 2014, the WWC modified this report in response to an independent review by the quality review team. Based on the review, the WWC removed 11 studies and one duplicate citation from the reference list and updated the number of studies in the Research section. The studies were removed because they did not assess the effectiveness of *Reading Mastery*. This changes the total number of identified *Reading Mastery* studies from 166 to 154 in the Research section and References. The WWC has not added studies to the evidence base, updated the literature search, or changed any study rating since the November 2013 release of this report.

1 The descriptive information for this program was obtained from a publicly available source: the WWC *Reading Mastery* intervention report for adolescent readers (http://ies.ed.gov/ncee/wwc/interventionreport.aspx?sid=418). The WWC requests developers to review the program description sections for accuracy from their perspective. The program description was provided to the developer in September 2012; however, the WWC received no response. Further verification of the accuracy of the descriptive information for this program is beyond the scope of this review. The literature search reflects documents publicly available by December 2012.

2 This report has been updated to include reviews of 95 studies that have been reviewed since the previous intervention report was released in August 2008. Of these additional studies, 78 were not within the scope of the Beginning Reading review protocol, and 17 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. The studies in this report were reviewed using the Evidence Standards from the WWC Procedures and Standards Handbook (version 2.1), along with those described in the Beginning Reading review protocol (version 2.1). The evidence presented in this report is based on available research. Findings and conclusions may change as new research becomes available.

**Recommended Citation**


**Glossary of Terms**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attrition</td>
<td>Attrition occurs when an outcome variable is not available for all participants initially assigned to the intervention and comparison groups. The WWC considers the total attrition rate and the difference in attrition rates across groups within a study.</td>
</tr>
<tr>
<td>Clustering adjustment</td>
<td>If intervention assignment is made at a cluster level and the analysis is conducted at the student level, the WWC will adjust the statistical significance to account for this mismatch, if necessary.</td>
</tr>
<tr>
<td>Confounding factor</td>
<td>A confounding factor is a component of a study that is completely aligned with one of the study conditions, making it impossible to separate how much of the observed effect was due to the intervention and how much was due to the factor.</td>
</tr>
<tr>
<td>Design</td>
<td>The design of a study is the method by which intervention and comparison groups were assigned.</td>
</tr>
<tr>
<td>Domain</td>
<td>A domain is a group of closely related outcomes.</td>
</tr>
<tr>
<td>Effect size</td>
<td>The effect size is a measure of the magnitude of an effect. The WWC uses a standardized measure to facilitate comparisons across studies and outcomes.</td>
</tr>
<tr>
<td>Eligibility</td>
<td>A study is eligible for review and inclusion in this report if it falls within the scope of the review protocol and uses either an experimental or matched comparison group design.</td>
</tr>
<tr>
<td>Equivalence</td>
<td>A demonstration that the analysis sample groups are similar on observed characteristics defined in the review area protocol.</td>
</tr>
<tr>
<td>Extent of evidence</td>
<td>An indication of how much evidence supports the findings. The criteria for the extent of evidence levels are given in the WWC Procedures and Standards Handbook (version 2.1).</td>
</tr>
<tr>
<td>Improvement index</td>
<td>Along a percentile distribution of students, the improvement index represents the gain or loss of the average student due to the intervention. As the average student starts at the 50th percentile, the measure ranges from −50 to +50.</td>
</tr>
<tr>
<td>Multiple comparison adjustment</td>
<td>When a study includes multiple outcomes or comparison groups, the WWC will adjust the statistical significance to account for the multiple comparisons, if necessary.</td>
</tr>
<tr>
<td>Quasi-experimental design (QED)</td>
<td>A quasi-experimental design (QED) is a research design in which subjects are assigned to intervention and comparison groups through a process that is not random.</td>
</tr>
<tr>
<td>Randomized controlled trial (RCT)</td>
<td>A randomized controlled trial (RCT) is an experiment in which investigators randomly assign eligible participants into intervention and comparison groups.</td>
</tr>
<tr>
<td>Rating of effectiveness</td>
<td>The WWC rates the effects of an intervention in each domain based on the quality of the research design and the magnitude, statistical significance, and consistency in findings. The criteria for the ratings of effectiveness are given in the WWC Procedures and Standards Handbook (version 2.1).</td>
</tr>
<tr>
<td>Single-case design</td>
<td>A research approach in which an outcome variable is measured repeatedly within and across different conditions that are defined by the presence or absence of an intervention.</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>The standard deviation of a measure shows how much variation exists across observations in the sample. A low standard deviation indicates that the observations in the sample tend to be very close to the mean; a high standard deviation indicates that the observations in the sample tend to be spread out over a large range of values.</td>
</tr>
<tr>
<td>Statistical significance</td>
<td>Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups. The WWC labels a finding statistically significant if the likelihood that the difference is due to chance is less than 5% (p &lt; 0.05).</td>
</tr>
<tr>
<td>Substantively important</td>
<td>A substantively important finding is one that has an effect size of 0.25 or greater, regardless of statistical significance.</td>
</tr>
</tbody>
</table>

*Please see the WWC Procedures and Standards Handbook (version 2.1) for additional details.*