

SUMMARY OF

GUIDED

INDEPENDENT

READING

AN EXAMINATION OF THE READING PRACTICE  
DATABASE AND THE SCIENTIFIC RESEARCH  
SUPPORTING GUIDED INDEPENDENT READING  
AS IMPLEMENTED IN READING RENAISSANCE

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I N D E P E N D E N T  
R E A D I N G

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## ■ Introduction

Following is a summary of the 72-page research report, *Guided Independent Reading (GIR)*. *GIR* summarizes the theoretical and evidence base for Accelerated Reader (AR) best classroom practices and builds on it through statistical examination of the Reading Practice Database (RPD). The RPD contains pre- and post-test STAR Reading scores and Accelerated Reader reading practice records for 50,823 students in grades 1–12 in 24 states who read more than three million books during the 2001–02 school year. The RPD is, we believe, the largest database ever assembled on student independent literature-based reading.

Also included in *GIR* is a history of the development of AR, best classroom practices, and the scientific research supporting both.

We prepared this summary to make the information and complex statistical analysis more accessible and perhaps whet the appetite of educators to read the full report. The full report is available for free by calling Renaissance Learning at (866) 846-7323. Additionally, a copy of the full report is available for downloading at [www.renlearn.com](http://www.renlearn.com).

## ■ Study Background and Findings

The 2000 National Reading Panel (NRP) report, which greatly influenced the federal No Child Left Behind and Reading First legislation, provided substantial scientific support for the practices recommended by Renaissance Learning. These include reading aloud, paired reading, and direct instruction of vocabulary, phonics, phonemic awareness, fluency, and comprehension.

The NRP, however, called into question the practice of “students reading individually on their own with little or no specific feedback.” In other words, the NRP did not find scientific evidence for setting aside classroom time for unguided independent reading of library books, also called “free reading.” Unfortunately, the NRP report did not go on to address guided independent reading *with feedback*, the kind of independent literature-based reading recommended by Renaissance Learning and supported by the Accelerated Reader (AR) daily progress-monitoring assessment system.

It is unfortunate that the NRP did not investigate guided independent reading, as the scientific research supporting this practice is very strong. One purpose of the *Guided Independent Reading (GIR)* study was to fill this gap by reviewing the current research on guided independent reading and by adding to the evidence base through the statistical examination of the Reading Practice Database (RPD).

The results are quite exciting. We confirmed most of our recommendations for guided independent reading using Accelerated Reader. We also discovered some new, even startling, things. The principal findings include:

1. Guided independent reading practice accelerates reading growth for all students, regardless of reading ability. (Unguided independent reading practice, on the other hand, may not accelerate reading growth for many students.) The key to guiding reading practice is information feedback.
2. To successfully guide independent reading practice using the feedback provided by AR, teachers and students must focus primarily on the average percent correct scored on AR Reading Practice Quizzes. The higher the average percent correct, the higher the reading gains.

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<sup>1</sup> Although the GIR report focuses on guided independent reading, AR also provides feedback on books read aloud, paired reading, textbook reading, magazine reading, and student understanding of higher-order thinking skills such as main idea, inference, and characterization.

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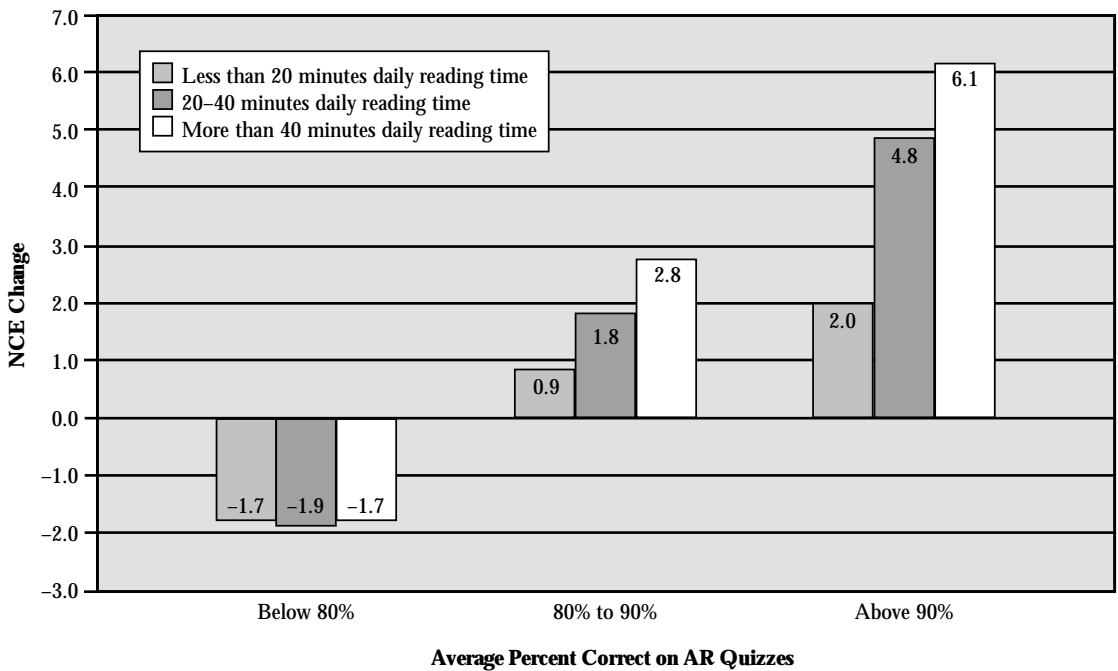
3. Increased reading practice time leads to greater reading growth when the reading practice is carefully guided. This is true for students of all ability levels in all grades. However, the law of diminishing returns applies. Ninety minutes of in-school engaged reading time is only slightly more beneficial than 60 minutes.
4. Teachers are the single most important factor in accelerating reading growth. Effective use of the data provided by AR enables teachers to accelerate reading growth for all students, including high- and low-achieving readers.
5. Reading behaviors differ between girls and boys. Lower average percent correct and higher rates of nonfiction reading may partially explain why boys tend to score lower than girls on reading achievement tests.
6. In the primary grades, low-achieving students benefit more from guided independent reading practice than high-achieving students. After fourth grade, however, both low- and high-achieving students benefit equally from guided independent reading.
7. Nonfiction reading is negatively correlated to reading gains and may be more difficult for students than fiction reading. However, many teachers are able to overcome the difficulty and help their students successfully read nonfiction books.
8. High implementation of AR best practices, particularly in Renaissance-certified classrooms, leads to the greatest growth for all students.

Following is a discussion of each of these eight points.

1. *Guided independent reading practice accelerates reading growth for all students, regardless of reading ability. (Unguided independent reading practice, on the other hand, may not accelerate reading growth for many students.) The key to guiding reading practice is information feedback.*

While this finding was not startling, the picture that emerged from examination of the RPD greatly clarified the positive effects of guided independent reading. Shown in Figure 1 is a graph that summarizes one of the more important tables from the full report.

**Figure 1: Impact of Guided Independent Reading and Average Percent Correct**  
 2001–02 School Year, Grades 2–12 Combined (N=45,670)

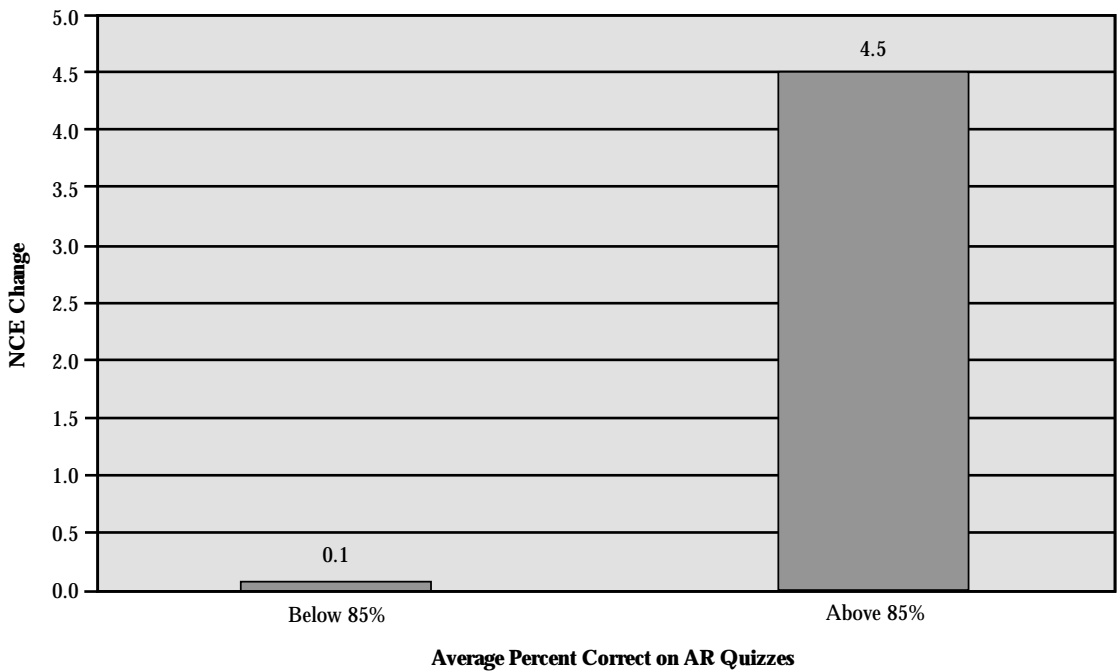


This graph vividly shows that when students are left to “just read” with little or no guidance (as indicated by a low average percent correct on AR quizzes), their reading scores can actually decline. The active guidance, intervention, and instruction provided by teachers is necessary to ensure adequate comprehension and reading gains.

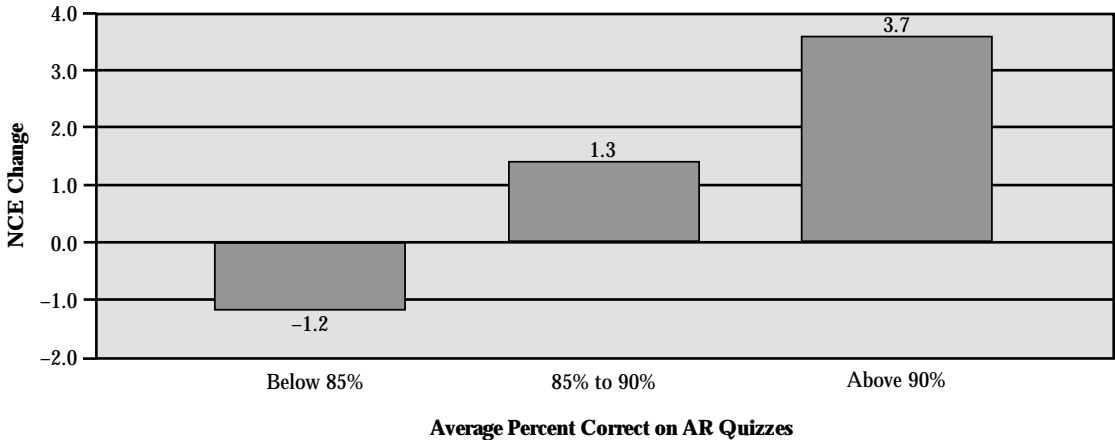
2. To successfully guide independent reading practice using the feedback provided by AR, teachers and students must focus primarily on the average percent correct scored on AR Reading Practice Quizzes. The higher the average percent correct, the higher the reading gains.

Figure 1 also shows the importance of high levels of successful independent reading as defined by high average percent correct on AR quizzes. Renaissance Learning recommends that teachers guide and instruct students so they achieve an average of 85% or more correct on their AR quizzes. The 85% rule was generally confirmed by the *GIR* study. Figure 2 shows the difference in gain students achieved above and below 85% correct.

**Figure 2: Average Gain Above and Below 85% Correct**  
**Students in Grades 2-12 with >20 Minutes Daily Reading Time (N=30,907)**



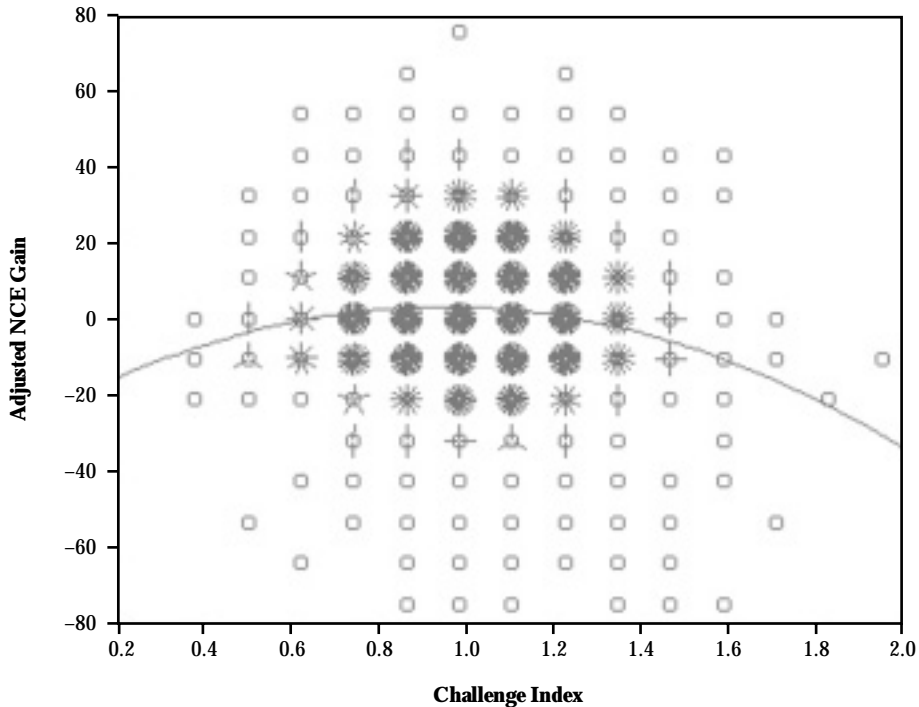
**Figure 3: Average Gain Below 85%, 85%–90%, and Above 90% Correct Students in Grades 4–12 with >20 Minutes Daily Reading Time (N=18,051)**



We also found that reading ability improves steadily as students' average percent correct on AR quizzes increases (up to approximately 97%). Therefore, the previous recommendation that teachers should guide students to read more difficult books when average percent correct exceeds 92% correct was not confirmed. As a result, we now recommend that students average 85% or higher on AR quizzes instead of the previous 85–92% range and stress with teachers that averages of higher than 90% are associated with greater gains.

Analysis of the RPD did confirm the recommended AR book levels (ZPD ranges) and also the predicted shape of the ZPD curve (see Figure 4). (ZPD stands for “zone of proximal development”—the level of practice that is challenging but not frustrating and leads to optimum growth.) Improvement in reading achievement drops when students read too many books above or below their recommended ZPD ranges. On the other hand, we found the ZPD curve to be fairly flat and, while statistically significant, not highly predictive of gain.

**Figure 4: Scatter Plot of NCE Change as a Function of Challenge Index<sup>2</sup>**  
**Students in Grades 3–12 with At Least 20 Minutes of Daily Engaged Reading Time**



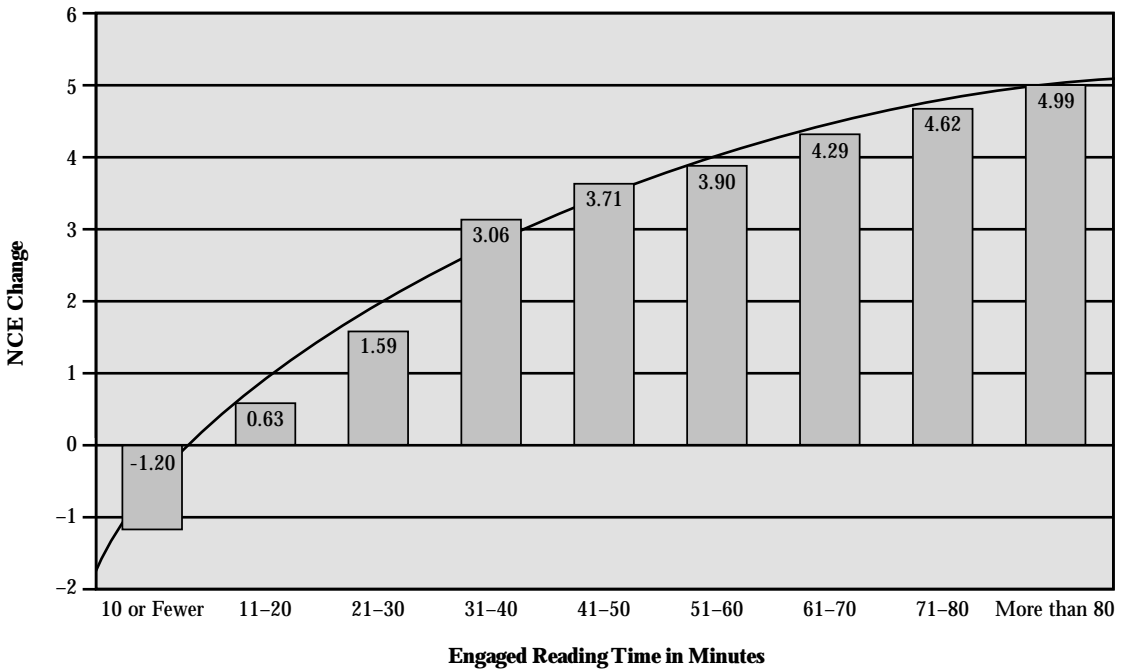
The relatively flat ZPD curve is good news because it shows that student achievement can improve by reading a wide range of books of varying levels of difficulty. The data indicate that teachers should allow students a fair amount of freedom to choose a wide range of books and follow their interests. This increases student motivation and helps make reading more successful. As has always been recommended by Renaissance Learning, the most important metric for teachers to watch is average percent correct on AR quizzes, followed by engaged reading time as measured by AR points, and finally, ZPD. In other words, students' guided independent reading should focus first on quality, then quantity, and then level.

<sup>2</sup> The Challenge Index is equal to (actual average book level) ÷ (predicted average book level from regression by pretest NCE level).

3. *Increased reading practice time leads to greater reading growth when the reading practice is carefully guided. This is true for students of all ability levels in all grades. However, the law of diminishing returns applies. Ninety minutes of in-school engaged reading time is only slightly more beneficial than 60 minutes.*

Our recommendation has been for schools to set aside 60 minutes per day for guided independent reading (less in grades K–2 when reading aloud and paired reading is emphasized more than independent reading). The *GIR* study confirmed that 60 minutes leads to high average reading gains and shows that students can make significant gains reading 20–30 minutes when they maintain averages of 90% or higher. (See Figure 1.) It also showed that the law of diminishing returns applies; 90 minutes is only marginally better than 60. The striking graph in Figure 5 is taken directly from the *GIR* study.

**Figure 5: NCE Change by Engaged Reading Time Range, Grades 2–12 (N=45,670)**



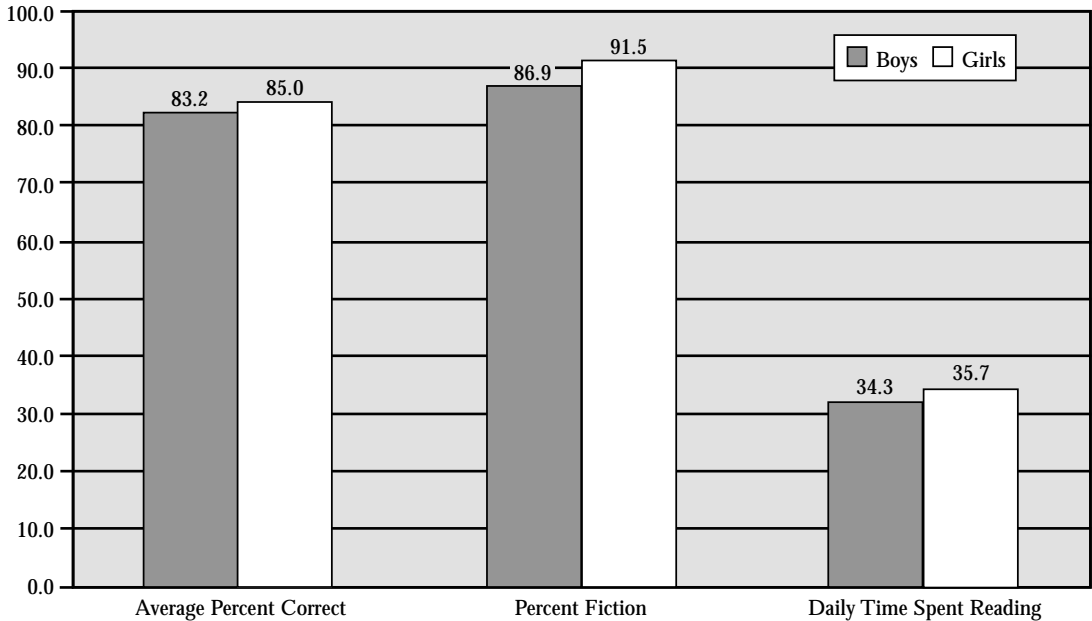
*4. Teachers are the single most important factor in accelerating reading growth. Effective use of the data provided by AR enables teachers to accelerate reading growth for all students, including high- and low-achieving readers.*

This is perhaps one of our most important findings. The NRP speculated that what explains how much reading practice students do is their initial reading ability. In other words, good readers read more because they were good readers to begin with. What we found in the *GIR* study, though, is that when teachers are implementing AR according to recommended best practices, it is the teacher to whom the student is assigned that largely determines how much reading students do—not initial reading ability. On average, the portion of the variance in engaged reading time that is explained by the teacher and classroom to whom the student is assigned is more than 10 times the portion explained by the student’s initial reading ability. In high-implementing classrooms, students with low reading ability read almost the same amount of time as students with high reading ability. This means teachers can have a huge impact on motivation to read, thereby leveling the playing field and closing the gap in student achievement.

*5. Reading behaviors differ between girls and boys. Lower average percent correct and higher rates of nonfiction reading may partially explain why boys tend to score lower than girls on reading achievement tests.*

We found statistically significant differences ( $p < 0.001$ ) in the reading behaviors of boys compared to girls in grades 1–12 combined. Shown in Figure 6 (next page) is a bar chart summarizing those differences.

**Figure 6: Gender Differences in Reading Behavior**  
**Students in Grades 1–12 with Known Gender (N=40,932)**



Boys tend to score lower on their AR quizzes, spend less engaged time reading, and read less fiction than girls. Since all three factors are correlated to reading achievement<sup>3</sup>, these differences in behavior could explain, in part, why girls tend to do better on tests of reading ability than boys. This information is important for teachers who can affect each of these factors and help boys do better.

*6. In the primary grades, low-achieving students benefit more from guided independent reading practice than high-achieving students. After fourth grade, however, both low- and high-achieving students benefit equally from guided independent reading.*

We found that overall in grades 1–12 combined, students of all ability levels improved at about the same rate for equal amounts of engaged reading time. However, when we disaggregated the data by grade level, we found that while guided independent reading causes improvements in reading ability at all grade levels, low-achieving students improve faster than high-achieving students in grades 1–4. After fourth grade, however, both low- and high-ability students gain at about the same rate for equal amounts of guided independent reading. While these effects need to be explored further, we speculate that the root cause is the difference in the oral language experience between low- and high-achieving students. Oral language experience may set the upper limit on our ability to close the gap through guided independent reading.

<sup>3</sup> For further explanation of the effects of fiction vs. nonfiction reading, see page 13.

Interestingly, even though the rate of growth caused by independent reading was highest in the early grades, the actual effect size (the relative impact of guided independent reading practice) was greatest in grades above fourth grade. This shows that guided independent reading practice is valuable at all grade levels even though the gap is likely to close faster in the earlier grades.

*7. Nonfiction reading is negatively correlated to reading gains and may be more difficult for students than fiction reading. However, many teachers are able to overcome the difficulty and help their students successfully read nonfiction books.*

This finding was particularly surprising. *GIR* is the only research study we are aware of that has investigated the differential effects of fiction vs. nonfiction reading on reading achievement. The reading of nonfiction books is highly recommended by virtually all reading experts (Dreher, 1999; Parkes, 2001; Snow, 2002). Most adult reading is of nonfiction material. Also, it is hard to see how students can excel in social studies and science without reading a significant amount of nonfiction. Renaissance Learning's recommendation prior to *GIR* was that nonfiction reading account for 20% of AR points. Yet RPD data showed, on average, at all grade levels, that the higher the percent nonfiction reading a student does, the lower the gain in reading ability. In light of this finding, the recommendation for nonfiction reading has been lowered to 10–15% of AR points.

One possible explanation for the negative effect of nonfiction reading is that nonfiction reading is more difficult than (or at least different from) fiction reading. Also, schools often have a smaller selection of nonfiction books. Regardless, one would expect that teachers could make a big difference by instructing students on how to approach nonfiction reading and ensuring an adequate selection of nonfiction books. Indeed, we found that many teachers in the RPD database were able to help their students achieve relatively high average percent correct on their nonfiction reading along with strong reading gains.

*8. High implementation of AR best practices, particularly in Renaissance-certified classrooms, leads to the greatest growth for all students.*

The RPD contains implementation data on a wide variety of classrooms, from those certified as being good implementers of AR best practices to non-certified and non-implementing classrooms<sup>4</sup>. We measure the level of AR implementation through the implementation index, which ranges from 0 to 1. In the RPD, certified classrooms in grades 2–8 implemented at 0.65, non-certified at 0.31, and non-implementing at 0.03.

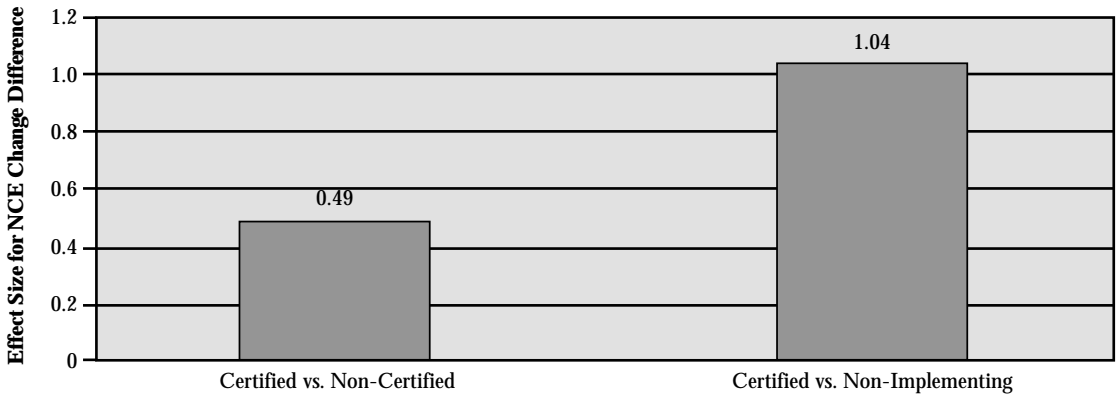
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<sup>4</sup> Non-implementing classrooms are those with less than 10 minutes of daily engaged reading time.

One of the most common and accepted ways to statistically measure the effectiveness of an educational program is through a statistic called “effect size.” Generally, an effect size of 0.5 is considered to be good.

Figure 7 illustrates the large effect sizes of reading gains for students in grades 2–8 (combined) in certified classrooms versus non-certified and non-implementing classrooms.

**Figure 7: Effect Size for Certified vs. Non-Certified and Low-Implementing Classrooms**  
**Classrooms in Grades 2–8 with >12 and <30 Students (N=1,806)**



## ■ Conclusion

The National Reading Panel report provided much support for the principles behind Accelerated Reader (AR) and the recommended best practices for classroom implementation. However, it failed to specifically examine the practice of guided independent reading. The *Guided Independent Reading (GIR)* study was intended to help fill that gap. The full report discusses the scientific research literature (the theoretical foundations) supporting guided independent reading and adds to the evidence base through a statistical examination of the Reading Practice Database (RPD). This summary of the complete 72-page study highlights several of the new insights gained.

We found that whereas letting students “just read” on their own can lower student reading achievement relative to their peers, highly successful independent reading practice is necessary to improve reading achievement. Successful independent reading requires the active guidance and instruction of teachers supported by the information feedback of AR.

The recommended AR best practices were generally supported by the *GIR* study, including allocating up to 60 minutes per day of classroom time for guided independent reading. We found, however, that the law of diminishing returns applies and allocating 90 minutes of in-school time for reading practice will yield only slightly greater gains than 20, 30, or 60 minutes. Additionally, the average percent correct cap of 92% was not supported. Students continue to show reading gains with average percent correct on AR quizzes up to approximately 97%.

We found that boys not only read less than girls at all grade levels, they also scored lower average percent correct on AR quizzes, suggesting that they read less carefully. Boys also tend to read more nonfiction. When combined with our finding that nonfiction reading tends to be correlated with lower reading gains, this may partly explain why boys consistently lag behind girls in reading achievement.

We found when teachers properly implement AR to support guided independent reading, it is a highly effective and powerful method for developing students who read well and are well read. Implementing AR with high integrity leads to the greatest growth in reading ability.

If you are interested in more comprehensive and in-depth information, the full *Guided Independent Reading* report is available for free by calling Renaissance Learning at (866) 846-7323 or visiting our website at [www.renlearn.com](http://www.renlearn.com).



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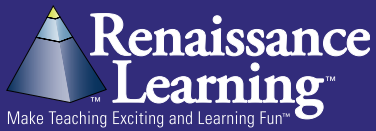
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