

Interventions for Adolescent Struggling Readers A Meta-Analysis with Implications for Practice

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IMPLICATIONS FOR PRACTICE

The findings suggest that researchers as well as teachers can influence reading outcomes of older students with reading difficulties, that students in middle and high school may benefit from intervention (though interventions provided to middle-grade students were associated with overall higher effect sizes), and that students with learning disabilities benefit from intervention, typically with larger effects than for other students who are struggling in reading but not identified as learning disabled.

1. Adolescence is not too late to intervene and older students who participate in interventions can benefit.

These findings provide educational leaders with a research-based foundation for making this case with confidence. At the same time, the reported effect sizes should be considered in terms of their practical significance. As mentioned earlier, many older students with reading difficulties participating in these studies were compared with older students receiving little or no intervention. This research design contrasts markedly with typical practice at the primary grade level, where all students are given reading instruction. Further, school personnel may need to consider the level of intensity and amount of instruction needed to close the reading gap between struggling and average readers. Researchers and technical assistance providers should be mindful neither to over-interpret nor under-interpret the likely outcomes.

2. Older students with reading difficulties benefit from interventions focused both at the word level and at the text level.

Identifying need and intervening accordingly in the appropriate areas (e.g., vocabulary, word reading, comprehension strategies, and so on) is associated with improved outcomes for older students with reading difficulties. Educators can use this framework as a heuristic for identifying needs in reading and for designing necessary interventions.

3. This meta-analysis suggests that teaching comprehension strategies to older students with reading difficulties is associated with an overall effect, equivalent to a gain of about one standard deviation.

Although the impact of these interventions on standardized measures of reading comprehension was not significantly different from zero, this may be due to insufficient intensity, i.e., the interventions may not have been provided for a sufficient length of time. Providing comprehension strategy instruction to struggling readers at points throughout the school day, including during content-area classes in addition to instruction in specialized reading interventions, may pay school wide dividends. This would be no small undertaking. Successful

implementation will require school-level leadership and coordinated planning. Content-area teachers would need additional professional development in order to teach these strategies effectively.

4. Older students with reading difficulties benefit from improved knowledge of word meanings and concepts.

Reading at length and widely is a valuable way to increase vocabulary knowledge, and students with reading difficulties spend less time reading than more capable readers. Findings from this meta-analysis support the use of more direct types of vocabulary instruction to improve students' vocabulary. Students engaged in vocabulary interventions make gains when directly tested on the words they were taught. Since vocabulary instruction is essential to all domains of learning, it may be valuable for schools to initiate vocabulary building practices school wide, thus benefiting a broad range of learners. Content-area teachers may see gains in achievement by focusing instructional time on the vocabulary necessary to understand the subject matter that students are expected to master. An important caveat: none of the studies in this meta-analysis used standardized measures of vocabulary. This is not surprising; standardized measures of vocabulary are difficult to influence because students' knowledge of specific word meanings or word types is typically the focus of intervention. Pending additional evidence, we know little about the extent to which these findings generalize to standardized-types of measures.

5. Word-study interventions for older students with reading difficulties are associated with small-to-moderate gains, even on standardized outcome measures.

For older students struggling at the word level, word-study intervention is an appropriate response.

6. Interventions provided by both researchers and teachers are associated with positive effects...

although, in this meta-analysis, interventions provided by researchers are associated with higher effects than interventions provided by teachers. There are several possible reasons: (a) researchers implement interventions more consistently, (b) researchers implement interventions with greater fidelity, (c) the novelty of a different teacher providing interventions positively influences students' response, and (d) studies implemented by researchers also use researcher-developed outcome measures, which are known to be associated with greater effects. Whatever the reason(s), teachers most frequently provide interventions in day-to-day school settings. Teachers of older struggling readers need additional training to implement interventions effectively. The more knowledge and expertise that teachers have, the greater their potential impact on student achievement.

7. For older readers, average gains in reading comprehension are smaller than gains in other reading and reading-related areas for the studies included in this meta-analysis.

The average effect size on standardized measures was associated with a very large confidence interval, suggesting a need for continued research. The effectiveness of these interventions for improving reading comprehension, the primary goal of intervention for older students, is not well established.

8. Additional research that uses measures that more closely mirror typical group-administered reading assessments is needed.

A number of the studies in this analysis used individually administered measures of reading comprehension to assess the effects of the intervention. While these measures do provide

useful information, they may not give a true indication of how students will perform in more typical classroom assessment situations. For example, individually administered standardized measures often involve reading much shorter passages than typical group-administered tests (such as state reading assessments), and often produce higher reading comprehension scores for struggling readers than group-administered tests (Torgesen, 2005). In order to provide better information about the instructional conditions necessary to close the reading gap for struggling readers, we need to invest in studies that provide instruction over longer periods of time and assess outcomes with measures that are more similar to those used by schools to monitor the reading progress of all students.

9. Older students with learning disabilities (LD) benefit from reading intervention, when it is appropriately focused.

It is important that students with LD or reading difficulties receive appropriate intervention. The difficulty of the task should not be underestimated, and effective instruction is only one piece of the larger puzzle, albeit an important piece. The results of this meta-analysis suggest that older students with reading difficulties can benefit from well-designed, effectively delivered intervention.