

Critical Review of Journal Article 1

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Therrien, W.J. (2004). Fluency and comprehension gains as a result of repeated reading: A meta-analysis. *Remedial and Special Education, 25*(4), 252-261. doi: 10.1177/07419325040250040801.

Therrien (2004) conducted a meta-analysis of repeated reading studies to address three areas of repeated reading intervention. The areas concentrated on were determining whether repeated reading intervention increased reading fluency and comprehension, which components are critical to the success of the program, and how students with cognitive disabilities (specifically learning disabilities) benefit from repeated reading. A six stepped procedure was used to determine which studies and formulas were to be included in this meta-analysis. Out of the original 33 articles researched, Therrien determined that 18 articles fulfilled the criteria set for this meta-analysis. This study revealed that repeated reading can be used effectively to improve reading fluency and reading comprehension for both nondisabled students (ND) and students with learning disabilities (LD). This study also demonstrated that essential instructional components within a repeated reading program, depending on the goal of intervention, are also beneficial and effective in the improvement of reading fluency and comprehension.

Summary of Article Findings

Findings from this study demonstrated a moderate mean increase in reading fluency for both ND students (ES = .76) and LD students (ES = .77), as well as an increase in mean comprehension for both ND students (ES = .48) and LD students (ES = .59). The study investigated more closely two dependent variables of repeated readings by separating them into nontransfer measures (measures of students' ability to fluently read or comprehend a passage read multiple times) and transfer measures (measures of students' ability to fluently read or

comprehend a new passage after having read a variety of passages multiple times). Repeated reading interventions were provided either through adult-led or student-led sessions. Across all nontransfer studies, the mean fluency increase was large ($ES = .83$) and mean comprehension effect size was moderate ($ES = .67$). Across all transfer studies, the mean fluency effect size was moderate ($ES = .50$) and an increase in mean comprehension effect size was demonstrated as well ($ES = .25$). It should be noted that fluency and comprehension effect sizes for students in transfer interventions led by adults were more than three times larger in both fluency ($ES = 1.37$) and comprehension ($ES = .77$) in comparison to those obtained led by students.

The study's findings concluded that students should be provided with a cue prior to reading a passage. Though the type of cue to be provided, whether it be fluency, comprehension, or a combination of both, could not be determined from the studies investigated, students who received a cue demonstrated improved measures on both fluency rate and comprehension of a read passage; therefore, Therrien recommended a combination of both a fluency and comprehension cue prior to reading a passage until further investigation into cue types is provided.

Therrien's study found that nontransfer studies which incorporated a fixed number of three or four repetitions of reading the same passage demonstrated a mean fluency effect size increase of more than 30% larger than passages that were only read twice. The findings also indicated that reading a passage more than four times only had a minimal effect as the difference in comprehension gains between the third read ($ES = .66$) and the fourth read ($ES = .71$) were small. Transfer studies which incorporated a performance criteria of either reading until a fixed number of correct words per minute were obtained or reading a passage within a predetermined time period, demonstrated a mean fluency ES of 1.70, whereas interventions that used a fixed

number of readings only obtained a mean fluency ES of .38. A comparison of performance criteria and fixed number of correct words per minute on reading comprehension could not be made because only one of the studies investigated measured comprehension with performance criterion; however, a mean comprehension effect size after three readings measured $ES = .49$, which was a large increase from passages read after only two readings ($ES = .03$).

This study demonstrated that corrective feedback on word errors of transfer studies seemed essential to the improvement of mean fluency effect size, as all students involved in an adult-led intervention were provided with corrective feedback and obtained a large mean fluency effect size ($ES = 1.37$). Corrective feedback on adult-led interventions for mean comprehension effect size was not investigated for transfer studies. Corrective feedback on nontransfer studies demonstrated the opposite results; those students who received corrective feedback obtained a mean fluency ES of .68, whereas students who did not receive corrective feedback obtained a mean fluency ES of .88. Therrien's study did not indicate whether these interventions were adult or student led. None of the nontransfer interventions investigated the effect of corrective feedback on reading comprehension.

The author depicted four main limitations to this analysis. First, the effectiveness of repeated reading for students at different reading levels could not be determined because students' reading levels were not provided in any of the studies investigated. Second, the author pointed out that most of the studies did not provide information on the types of reading materials used during the interventions. Third, the importance of including charting or comprehension component in transfer repeated reading interventions could not be investigated. Fourthly, the relationships between repeated reading and gains in fluency and comprehension due to unknown variables could not be further explored because there were no control groups to compare with. The author

did recommend that additional components, such as modeling and how repeated reading intervention effected overall reading abilities on reading achievement assessments, should be investigated; as well as a need for long term studies to be pursued to determine if there are long term consistent effects of repeated reading intervention.

Critique of Article Findings

Therrien presented the findings from this analysis in a logical, clear, and straightforward manner, making the information simple to understand. Therrien thoroughly explained the purpose of the study, how information and studies were chosen and gathered, and remained focus on answering the three questions he presented regarding repeated readings. Therrien's depiction of the studies' results and their implications of repeated readings, the limitations of the studies, and implications for future research were coherent and based on observations from previous studies as well as his own analysis.

Therrien's study provided evidence that repeated reading interventions increased overall reading fluency and reading comprehension for both ND students and students with LD. Another study conducted by Chard, Vaughn, and Tyler (2002) supports Therrien's findings in that their study concluded that repeated reading intervention for students with LD demonstrated improvements in reading rate, accuracy, and comprehension as well. One area that Therrien's study did not provide information on was how different age/grade level students responded to repeated reading intervention. A study performed by Wexler, Vaughn, Roberts, and Denton (2010) separated repeated reading interventions into grade levels, and found that elementary aged students with LD demonstrated improvement in their reading abilities more than high school aged students with LD, who represented a growth in fluency rate but not in word reading

accuracy and reading comprehension. Valleley & Shriver (2003) findings also demonstrated an increase in reading fluency for high school students who participated in repeated reading intervention and that there was very little, if any, improvement in reading comprehension abilities. Lo, Cooke, & Starling (2011) study indicated that a small sample of at risk grade 2 readers demonstrated a large improvement in their reading fluency rates after completing a repeated reading intervention program, however, no data was collected on the effects on their reading comprehension abilities.

Daley & Martens (1994) and Wexler et al. (2010) findings concur with Therrien's observations that adult-led repeated reading consistently demonstrate higher increases in mean fluency and mean comprehension for both LD and ND students than with student-led repeated reading intervention; though Wexler et al. (2010) found student-led repeated reading intervention more successful at the high school level than the elementary level. Wexler et al. (2010) suggested a need to investigate the student's reading own reading level and skills who were leading the sessions and how they may influence their ability to administer and led a session of repeated reading activity. Daley & Martens (1994) included results portraying reading fluency growth in repeated reading interventions which incorporated teachers modeling desired reading skills and strategies being taught during repeated reading sessions, which were not discussed in Therrien's study, though mentioned in the limitations section of his findings.

Therrien focused on the large improvement of mean fluency effect sizes of repeated reading interventions which provided corrective feedback for transfer results conducted by an adult, and minimally reported the opposite findings of a decrease of mean fluency when corrective feedback was provided for nontransfer activities. Wexler, Vaughn, Roberts, & Denton (2010) also found corrective feedback to be effective in improving overall reading fluency and reading

comprehension through repeated readings; though, a description of what type of feedback given or whether the intervention was led by an adult or student was not provided

Conclusion

In summary, Therrien's analysis clearly addressed the three areas of repeated reading investigated in this study. Repeated readings demonstrated mean increase in reading fluency and reading comprehension for both ND students and LD students; however, further investigation into age or grade levels and the effects of repeated readings on mean reading fluency and reading comprehension should be completed. Therrien's study investigated two dependent variables of transfer and nontransfer measures of mean fluency and mean comprehension more extensively than the studies used in this analysis initially provided and results indicated that across all nontransfer and transfer studies, an increase mean fluency and mean comprehension effect size occurred. Also, mean effect size of students involved in transfer interventions led by adults were significantly larger in both fluency and comprehension, though a separation of results of elementary aged and high school aged students was not provided. Therrien also indicated that repeated reading programs which focus on a student's ability to read and comprehend a particular passage, two essential components to be included are that students should be cued to focus on speed and comprehension while reading, and a passage should be read three or four times. However, if the focus of the repeated reading program is to improve student's overall reading fluency and reading comprehension, passages should be read aloud to an adult, corrective feedback should be provided on reading errors by an adult, and passages should be read until a performance criterion is met.

References

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