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How to Best Help Secondary Students Who Struggle With Foundational Reading Skills and Motivation

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HOW TO BEST HELP SECONDARY STUDENTS WHO STRUGGLE WITH FOUNDATIONAL READING SKILLS AND MOTIVATION

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Abstract

The focus of this literature review is to explore what secondary teachers can do to better support their students who struggle with reading by examining what works in elementary educational settings and with students who are English learners or who have disabilities, along with how motivation factors into reading achievement. Reading is considered an essential skill that students need in order to be successful both inside and outside of the classroom. Much of the research on reading intervention focused on elementary students and discussed how important it was to catch reading struggles early so students can be set up for success later. With that said, many secondary students go into middle and high school still struggling with foundational reading skills. The research ultimately suggested that foundational reading skills need to be internalized before students can be successful in learning more advanced reading skills, and that motivation is an important factor in increasing reading achievement. Thus, foundational reading interventions and motivational interventions are important to incorporate in secondary settings and instructional plans to set up struggling readers for success.

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CHAPTER I: INTRODUCTION

Reading is considered an essential skill that students need in order to be successful both inside and outside of the classroom. However, according to the United States Department of Education's National Assessment of Educational Progress (NAEP) Report Card from 2019, only 35% of 4th graders, 34% of 8th graders, and 37% of 12th graders are proficient in reading. The National Report Card is a summary of the nation's standardized testing scores which does not always accurately measure a student's true abilities; however, this is the most comprehensive data the U.S. currently has on proficiency for the academic achievement of students. It is striking that most students in America are required to take English Language Arts classes throughout their 12 years of education, yet the number of readers in America who are proficient in reading is well below 50% (NAEP, 2019).

Research has provided many resources for supporting younger struggling readers, specifically students who are in grades K-4 (Rasinski, 2017). Research has found that if a student's reading struggles are discovered and supported in the early stages, it will help them become better readers as they get older and progress through school (Rasinski, 2017). This might be because many readers who struggle have trouble with basic reading skills such as phonemic awareness, phonics, reading fluency, and word recognition (Rasinski, 2017). These skills are usually taught in the primary educational settings as students are still learning how to read. Rasinski (2017) stated, "The Common Core State Standards have identified word identification and fluency as foundational competencies that should be developed through grade 5" (p. 520). Rasinski (2017) also reported that the instruction and interventions for reading fluency and word recognition should occur between Kindergarten and 3rd Grade since these skills are considered foundational to reading. Additionally, since reading fluency and word identification are skills

that are taught and developed in the elementary grades, many resources for struggling readers who are behind in these skills focus on younger students. This gives the impression that reading interventions only work if struggling readers are identified between Kindergarten and 5th Grade and the interventions for those foundational skills are put into place during that time. This idea does not account for secondary students whose reading struggles were identified after the timeframe for early interventions. It also does not account for secondary students who are English learners or who have disabilities.

Reading instruction and reading materials progressively become harder and more complex as students advance grade levels (Rasinski, 2017). Secondary students who struggle with reading need just as much, if not more support than elementary students. If these older students do not have a strong foundation in basic skills such as fluency, phonics, word identification, and decoding, they will never have a chance to be successful in using more advanced reading skills such as comprehension, summarizing, inferencing, and predicting (Rasinski, 2017). The question that needs to be answered is: how can teachers support secondary students who struggle with reading? There are several factors to consider when trying to answer this question. First, one must consider the strategies and early interventions that secondary teachers can borrow from primary teachers and primary curriculum. If those early strategies and interventions work with younger students, there must be a way to incorporate them into secondary curriculum to help older struggling readers. Secondly, it is important to consider student motivation and the role it plays in reading. When faced with a difficult challenge, sometimes it is easier to give up, not try, and avoid the task. Teachers need to determine how to better motivate their struggling readers to engage in reading tasks, along with trying to work through motivational gaps and make reading more enjoyable for their students. Lastly, it is important to investigate students with disabilities

and students who are English language learners. The approach to support these students may be different due to their individual and unique struggles. If not, it is important to examine what interventions and strategies are universal when it comes to supporting struggling readers of any kind. The focus of this literature review will be on what secondary teachers can do to better support their students who struggle with reading.

Response To Intervention

When evaluating learning disabilities, Arias-Gundin and Llamazares (2021) indicated that 80% of all learning disabilities (LD) center on reading. Because of this, Arias-Gundin and Llamazares conducted a review of the efficacy of the response to intervention (RTI) model in increasing reading achievement in students who have LD in reading. Arias-Gundin and Llamazares (2021) noted that before the RTI model, many schools used the discrepancy model, which essentially means that schools would wait until a student failed before evaluating and potentially qualifying them for special education services. Now, many schools have adapted the RTI model. Arias-Gundin and Llamazares noted that this model works to continuously evaluate students' needs and abilities and provide appropriate interventions for potential struggles as they come up. Since the RTI model is continuously monitoring progress for students, it can identify students with LD earlier or even prevent some students from being qualified for special education. The RTI model also incorporates interventions for all students who need them, thus students can be more successful in reading and be set up for better success as they progress through school. Overall, RTI is a resource that aids in detecting, helping, or preventing learning disabilities for reading.

In their book *RTI Success*, Whitten et al. (2019) described RTI as "a multitiered instructional model designed to promote growth for all learners" (p. 2). RTI consists of three

tiers of intervention with frequent monitoring of student progress. Tier 1 is the "universal-level" where students receive differentiated and evidence-based instruction within the general education setting (Whitten et al., 2019, p. 12). If students are significantly below their peers on the frequent progress monitoring checks and Tier 1 interventions are not working, then a student can be moved into Tier 2. Tier 2 is where students receive increased interventions in a small-group instructional setting that is meant to target their area of need. Some students thrive in the Tier 2 and make enough progress to be pushed back into a Tier 1 setting, but some students need more individualized attention. For students who are still struggling after Tier 2 interventions, they might need to be moved into Tier 3. Tier 3 is an increased level of support that is taught directly to the individual to target their specific needs by a special education teacher or a specialist.

In all three tiers of instruction, Whitten et al. (2019) describe the five principles that educators should be following when implementing RTI. The first is the belief that all children can learn. The second principle is that teachers need to use suitable assessments to inform their instruction and the third principle is that they need to use evidence-based teaching methods to ensure students are getting quality instruction. The fourth principle of RTI involves facilitating positive relationships within the classroom in order to "maximize learning" (Whitten et al., 2019, p. 18). The last principle is that educators must work collaboratively and communicate effectively with one another to promote success within the RTI model. Over the last decade, more and more schools have been adopting the RTI model because it is a proactive solution rather than a reactive solution (i.e., the discrepancy model) to student struggles and it has been proven to increase student achievement and to catch learning struggles early (Whitten et al., 2019). When it comes to struggling readers or readers with disabilities, the RTI model and

targeted reading interventions can be beneficial to helping students be more successful and increase their reading achievement.

Definitions of Terms

The National Reading Panel report is a comprehensive research review created by Shanahan and North Central Regional Educational Lab (2005) and is used to guide and assist reading instruction and legislation. The report goes into detail about each of the foundational skills of reading and gives teachers facts, tips, and advice on how to support those skills. The first skill is phonemic awareness. The report defines phonemic awareness as the ability to recognize and use the individual sounds in words. Phonemes are the basic units of sound that make up words and are where children begin their reading development. According to the report, children should receive up to 15 minutes of phonemic awareness instruction a day when they are in Kindergarten and the most beneficial phonemic awareness skills to teach are segmenting and blending—combining individual sounds or phonemes to form words.

The second reading skill explained in the National Reading Panel report is phonics. Phonics is defined as the relationship between letters and sounds so students can take printed words and turn them into spoken words. A basic example of teaching phonics would be like teaching children the sounds each letter makes in the alphabet. The report noted that teaching phonics to students in kindergarten through second grade can impact early reading comprehension and phonics are most effectively taught within small group settings. Once students have a grasp on phonemic awareness and phonics, the focus of reading instruction usually shifts to oral reading fluency.

The National Reading Panel report defined oral reading fluency as a student's ability to read a text aloud quickly and accurately with expression. Teaching reading fluency can help

students to better recognize and decode words, which in turn increases reading comprehension. The NRP report suggested that reading fluency be practiced in a one-on-one setting. That could be between a student and teacher, a student and a parent, or a student and another student. Many students will not be able to move up in their reading abilities if they struggle with oral reading fluency, thus, this is an important turning point in reading instruction. To supplement oral reading fluency and comprehension, vocabulary is vital to teach students.

The National Reading Panel report defined vocabulary as words and their meanings. By teaching vocabulary, it can increase a student's ability to recognize the words that they read and better comprehend a text. Vocabulary can be taught at any level of reading ability and the National Reading Panel report suggested teaching vocabulary both directly and indirectly. Students should get explicit instruction for certain vocabulary words, but they should also have the opportunity to read independently to discover new words and their possible meanings. All reading skills are taught to eventually help students to independently read and comprehend texts. That is why the NRP report discussed how each individual skill mentioned above affects reading comprehension.

Reading comprehension is the ability to independently read, understand, and interpret information in a text. Each early reading skill builds off the next in order to work towards reading comprehension. With that said, it is also important to explicitly teach reading comprehension strategies to students to help them read, interpret, and understand a wider variety of texts on their own. The National Reading Panel (2005) report stated that students who struggle with word reading and fluency often will have a harder time comprehending a text than students who already have a strong grasp on those skills. If this is the case, secondary reading curriculum should address a wide variety of reading abilities. Struggling readers in middle and high school

may not have the necessary tools and abilities in phonemic awareness, phonics, or fluency to be able to independently read and comprehend a text. Secondary reading curriculum should include foundational reading interventions and instruction in order to meet a wider variety of reading needs and abilities.

Research Question

The guiding research question for this thesis is: How can teachers support secondary students who struggle with reading? Upon researching this question, it is important to look at three things. First, it is central to explore the strategies and early interventions that primary teachers use and figure out how these things can be incorporated into secondary reading curriculum. Second, it is important to consider student motivation and how it can play a role in reading engagement and reading achievement. Third, students with disabilities and English learners must be considered when looking at reading interventions because there may be different strategies and interventions to meet the unique needs of the students in these groups.

CHAPTER II: LITERATURE REVIEW

Literature Search Procedures

Searches from Google Scholar, Academic Search Premier, ERIC, and ProQuest Education Journals were used in locating sources. The criteria for choosing and reviewing articles involved finding sources from peer-reviewed journals and books that focused on reading interventions and motivation for struggling readers published between the years 2015-2021. The key words used in these searches involved "early reading interventions," "elementary reading interventions," "reading interventions for struggling readers," "reading interventions for disabilities," "reading interventions for ELLs," and "motivation for struggling readers." The following review of literature consists of three sections: Early Reading Interventions, Reading Interventions for Students with Disabilities and English Learners, and The Effects of Motivation on Reading Achievement.

Early Reading Interventions

The first thing to consider when exploring how to best help secondary struggling readers is what kinds of reading interventions are already out there. This section will explore reading interventions, particularly for foundational skills, that are used in elementary education, secondary education, and adult education.

Elementary Interventions

When considering how to best help secondary students who struggle with foundational reading skills, it is beneficial to explore the types of interventions and strategies that are used in elementary reading curriculum. Bratsch-Hines et al. (2020) conducted a study on the effects of targeted reading interventions (TRI) for struggling readers. In their study, the researchers focused on younger students with low phonological awareness and vocabulary skills to examine how TRI

can improve reading achievement. Bratsch-Hines et al. noted that if struggling readers are not identified early and they do not receive targeted interventions, they are more likely to fall below grade level or be at risk for reading-centered disabilities. It is important for teachers to identify struggling readers early and differentiate reading instruction to increase reading ability. The purpose of TRI, a professional development program, is to help teachers identify at-risk students and improve their foundational reading skills such as decoding, spelling, phonological awareness, vocabulary, and eventually comprehension. Bratsch-Hines et al. conducted their study within 10 elementary schools over the course of three years to determine whether TRI would help children who scored lowest on measures of phonological awareness and vocabulary skills to increase their reading abilities.

Bratsch-Hines et al. (2020) used the *Comprehensive Test of Phonological Processing* and the Oral Vocabulary subtest of *The Test of Language Development-Fourth Edition* to measure student progress over the three years of TRI implementation. They also made sure teachers within the schools received TRI training and professional development. The key findings of Bratsch-Hines et al.'s study first indicated that TRI increased student reading achievement. Looking more closely at the data, students made significant progress in the areas of decoding, spelling, and reading comprehension skills. Bratsch-Hines et al. noted when given TRI interventions in kindergarten and first grade classrooms that included scaffolding vocabulary interventions with decoding instruction, it greatly improved student's foundational reading abilities and helped them to be more successful as they continue through school. Bratsch-Hines et al. stated that all-encompassing foundational literacy instruction can greatly influence early reading skills for struggling readers who may be at risk for learning disabilities. Overall, Bratsch-Hines et al.'s (2020) study indicated that targeted reading interventions and early identification

of reading struggles is effective in increasing literacy abilities for students who struggle with early reading skills such as phonological awareness and vocabulary.

Bratsch-Hines et al. (2020) discussed TRI teacher professional development to help increase reading achievement, which is similar to Jefferson et al.'s (2017) study on Tier 1 reading interventions in an RTI setting. In their study about Tier 1 interventions of reading fluency and comprehension outcomes, Jefferson et al. measured the effects of these interventions on high stakes tests. In an RTI setting, Tier 1 interventions are conducted by trained teachers in a general educational setting using evidence-based strategies. Since high-stakes measures have become conditional in many US school systems, Jefferson et al. explored how Tier 1 RTI interventions could increase reading achievement on high stakes tests. In their study, Jefferson et al. used three research-based interventions: 1) graphic organizers, 2) self-questioning strategies, and 3) repeated reading. These interventions were conducted in a Tier 1 setting across three schools on 83 proficient third grade readers.

To measure reading achievement, Jefferson et al. (2017) used the Oral Fluency Rater Scale, the *Wechsler Individual Achievement Test III*, and statewide grade-level assessments. The sample size was split into two groups: a control group and an intervention group. The intervention group received the above Tier 1 reading fluency and comprehension interventions, while the control group received the school's general reading curriculum. The key findings of Jefferson et al.'s study indicated that Tier 1 instruction improved prosodic reading skills, which leads to improved reading comprehension. With that said, since the experiment was conducted on non-struggling readers, the results indicated that Tier 1 interventions did not statistically increase reading fluency or comprehension. Jefferson et al. suggested that if they used struggling readers or increased the timeframe of interventions that the results may have been different.

However, the data suggested that Tier 1 instruction still had a significant impact on student reading performance and the teachers providing Tier 1 instruction noted a positive difference in student confidence and participation, stating that they would gladly continue with the interventions even after the study ended. All in all, Jefferson et al.'s (2017) study showed how Tier 1 interventions can increase student engagement, participation, and reading achievement, thus helping students to perform higher on high stakes measures.

Jefferson et al. (2017) focused on general Tier 1 instruction in an RTI framework, but for many struggling readers, Tier 2 interventions are a better option. Mendez et al. (2016) conducted a study that focused on struggling readers in first and second grade who required Tier 2 interventions. In the study, Mendez et al. created a multicomponent intervention system meant to engage their struggling readers in reading tasks and built on foundational reading skills such as fluency, decoding, and word identification. The foundation of their Tier 2 intervention system was based on Reading Mastery, a program that uses instruction in "controlled vocabulary, orthographical prompts, and careful introduction to phonics rules" (Mendes et al., 2016, pg. 277). To supplement the Reading Mastery curriculum, Mendez et al. incorporated Listening-While-Reading (LWR) activities, teacher-made games, computer-based reading activities, and parental homework involvement. Mendez et al. conducted their study on a sample size of 11 students who were all identified by the school's RTI coordinator as failing to meet grade-level expectations for reading.

To measure reading progress, Mendez et al. (2016) used the *Vanderbilt Attention-Deficit Hyperactivity Disorder Diagnostic Teacher Rating Scale* (VADTS), the *Woodcock Reading Mastery Test-III*, a parent questionnaire, and parent reading logs. For the study, the sample size was split into two small groups and interventions were delivered four days a week for 35 minutes

a day for a total of 16 weeks. During the 35-minute sessions, students worked in pairs on audio LWR lessons and practiced choral reading through the Reading Mastery program. They also each had individual work time with the reading specialist on phonics and decoding and played teacher-made games or computer activities centered on what they were reading. Each night parents were instructed to read with their child and make corrections within two seconds, giving praise and encouragement as they went. The key findings of this study indicated that students made significant gains in word identification, decoding, and reading fluency. They also improved their reading comprehension through this program. Comparing the benchmarks for the sample group to the other children in the school who were reading at or near grade level, the students in the sample groups had accelerated growth in their reading skills and this created the potential for them to catch up to their peers. The biggest area of growth for the students in this study was in oral reading fluency. Mendez et al. explained that this was due to the immediate error correction procedure used while kids read aloud to their reading teacher or to their parents. They also believed the LWR exercises helped to increase reading fluency. Another significant finding in Mendez et al.'s study was that the students with more parental involvement seemed to progress farther and faster than the students who did not have as much parental involvement. Overall, Mendez et al.'s (2016) study showed the importance of multicomponent Tier 2 interventions and how they can accelerate students' learning to help them make strides towards developing stronger foundations for reading.

Mendez et al.'s (2016) study used various Tier 2 interventions to increase reading fluency, but Mulé et al. (2018) investigated the effectiveness of just two reading interventions. Mulé et al. conducted their study by comparing the effectiveness of two high-frequency word interventions among struggling readers in first grade. When students learn reading skills early, they are more

likely to be successful academically later in school. That is why it is important to provide targeted interventions for struggling readers. Mulé et al.'s study focused on two different word recognition interventions: Traditional Drill Practice (TDP) and Word sheets (WS). TDP is where students are presented with a set of flashcards that contain unknown words. They go through the cards, repeating each word after the teacher and eventually work towards recognizing and reading the words independently. WS are similar, but rather than presenting the words in isolation, all the unfamiliar words are on a single sheet that is made to look like lines of text in a story. Mulé et al. provided these two interventions to a sample size of 27 first-grade students in the hopes of finding which intervention is most effective in increasing word-recognition and generalization.

Before the study, Mulé et al. (2018) conducted pre-assessments to identify specific words to use with students for the interventions. Then they had an interventionalist conduct independent sessions with students while another collected data on student word recognition. Eventually, students were tested with reading probes to measure how many words they could generalize in the context of a story after practicing with TDP and WS. The key findings of Mulé et al.'s study indicated that of the two interventions, TDP was more effective in memorization and generalization of new words. This was surprising to the researchers because due to the more independent nature of WS, students had more opportunities to practice targeted words using WS compared to TDP. Mulé et al. assumed that one of the reasons for this was because TDP was conducted by a teacher, thus students had increased attention and engagement whereas WS was student-paced, and students could lose focus more easily. Another reason Mulé et al. had for the surprising results was that TDP presented words in isolation and WS presented them together on one sheet, so students who generally struggle with tracking words on a busy page could have had

a harder time retaining the information compared to seeing words in isolation. Largely, Mulé et al.'s (2018) study indicated that TDP is an effective strategy teachers can use to help students learn and generalize new words.

Just like Mulé et al.'s (2018) study, Wu and Gadke took two reading interventions into comparison for their study. Wu and Gadke (2017) conducted a study that compared the effects of repeated readings (RR) versus video self-modeling (VSM) on reading fluency for students who struggle with reading. According to Wu and Gadke, RR is one of the most recommended and effective reading fluency interventions. With that said, due to many technological advances within school systems, VSM has been growing in popularity as a reading intervention. Wu and Gadke decided to measure how effective RR is in increasing reading fluency compared to VSM, along with how the two interventions can potentially work together. The study was conducted on a small sample size of four students in elementary school who read significantly below grade-level. Wu and Gadke conducted a series of 10 intervention sessions that alternated RR and VSM. Once those 10 sessions were over, they conducted another five sessions that combined RR and VSM to measure the effectiveness of the two reading interventions on reading fluency for struggling readers.

To measure reading baselines and fluency, Wu and Gadke (2017) used the *Gray Oral Reading Tests-Fifth Edition* and Curriculum Based Measurements (CBM) reading fluency probes from AIMSweb. The key findings of this study indicated that when students received just the RR intervention, they significantly improved their reading fluency from their baseline. On the other hand, students who received VSM in isolation did not make gains in their reading fluency. According to Wu and Gadke, this result is inconsistent with previous research on VSM. When students had RR supplemented with VSM, there was little improvement in student reading

fluency. The results of Wu and Gadke's (2017) study indicated that using RR as a reading intervention is effective in increasing reading fluency in struggling readers, but there needs to be more research on the use and effectiveness of VSM.

Similar to Wu and Gadke (2017) comparing RR to VSM, Hawkins et al. (2015) decided to compare RR to another reading strategy. Hawkins et al. conducted a study comparing the effectiveness of RR versus listening while reading (LWR) in improving reading fluency and comprehension for struggling readers. When evaluating the efficiency of interventions, Hawkins et al. thought it was important to look at the available resources and time constraints of most schools. First, many schools do not have the opportunity to spend thousands of dollars on reading intervention programs and materials and often just use what is readily available to them. Secondly, there is a limited amount of time in a school day, and teachers often must find ways to make time for implementing reading interventions. Hawkins et al. believe that RR and LWR are easily accessible interventions, and they are not extremely time consuming. With that said, RR and LWR are still thought to be effective strategies. For their study, Hawkins et al. (2015) used a sample size of four fourth-grade students who struggle with reading to measure which reading intervention is most effective in increasing fluency and comprehension.

To measure gains in fluency and comprehension, Hawkins et al. (2015) collected data on RR and LWR using correct words per minute (CWPM) probes and a comprehension assessment at the end of each intervention session. They also timed each intervention session to track the length required for each intervention. The key findings of the study indicated that of the four students, three of them had similar gains in CWPM on both LWR and RR, but when looking at the time of the sessions, the findings suggested that LWR lead students to faster gains in reading than RR. The fourth student performed better using RR overall. Hawkins et al. believed that one

of the main reasons the fourth student did better with RR is because it was a preferred activity that was teacher-lead, so the student was more motivated to engage in RR than LWR. Overall, Hawkins et al. believed that LWR was a better intervention to use because it had a greater outcome on the majority of the sample size, it did not require constant adult supervision, and intervention sessions using LWR go a lot faster than RR. In sum, even though Hawkins et al.'s (2015) study leans towards LWR over RR, their study also showed that not all students are the same and RR may work better for some.

Much like Hawkins et al. (2015) using time as a factor in their study, Miciak et al. (2018) thought it was important to also investigate the timeframe of intervention programs. Miciak et al. conducted a study comparing the effects between one versus two years of reading intervention for struggling readers. In their article, Miciak et al. stressed the importance of sufficient early reading intervention to help struggling readers be more successful in their future educational paths. Miciak et al. split their sample size of students into three groups: 162 students were in the two-year researcher-provided reading intervention group, 161 students were in the one-year researcher-provided reading intervention group, and 161 students were in the school-provided reading intervention "business as usual" (BAU) group (pg. 26). The researchers hypothesized that by the end of the study, the students in the two-year group would outperform the other two groups in reading achievement, focusing particularly on reading comprehension. They also hypothesized that the students in the one-year group would outperform the BAU group in reading achievement.

To measure the decoding and spelling skills, Miciak et al. (2018) used the *Woodcock-Johnson III Tests of Achievement* (WJ-III). For measuring reading fluency, they used the Test of Word Reading Efficiency. To track reading comprehension, the researchers used *Gates-*

MacGinitie and the *WJ-III*. The key findings of the study indicated that students in the two-year intervention group significantly scored higher on reading fluency and word reading compared to the one-year and BAU groups. With that said, when looking at reading comprehension, Miciak et al. reported that there were no statistically significant differences between any of the groups. Miciak et al. (2018) showed that two years versus one year of reading intervention can help students to greatly improve word recognition and fluency, but there needs to be more research on how to increase reading comprehension for elementary students.

Secondary Interventions

The above studies explored elementary reading intervention strategies and how they increased reading achievement for early reading skills, but most secondary students who struggle with reading also benefit from targeted reading interventions. Oslund et al. (2018) conducted a study comparing the effects of word reading and vocabulary instruction on secondary struggling readers and proficient readers. Being that reading comprehension is one of the most important reading skills students need to be successful in middle and high school, Oslund et al. deemed it important to compare how word reading and vocabulary knowledge predict reading comprehension achievement for all readers. Oslund et al. compared a sample size of 859 students. To determine struggling versus proficient readers, the researchers used *the Gates MacGinitie Reading Tests-fourth edition* (GMRT-4). Students who fell below the 30th percentile were considered struggling and students who were above the 30th percentile were considered proficient.

For their study, Oslund et al. (2018) used the *GMRT-4* to measure reading comprehension and vocabulary. For word reading progress, they used the *Test of Word Reading Efficiency (2nd ed.*) Oslund et al. also measured inference-making skills using 19 multiple choice questions after

students read one narrative and one expository passage, and they measured silent-reading efficiency using the *Test of Silent Reading Efficiency and Comprehension*. The key findings of this study indicated that vocabulary instruction is effective for both struggling and proficient readers in predicting reading comprehension outcomes. With that said, proficient readers are generally more fluent and know more vocabulary, thus struggling readers are more likely to benefit from direct vocabulary instruction. Another key finding in Oslund et al.'s study showed that word reading skills are significant predictors of reading comprehension achievement for struggling readers but has no effect on proficient readers. This is because it is often harder for struggling readers to identify and decode words compared to proficient readers who have internalized the skill. Oslund et al. suggested, based on their research, that struggling readers should receive explicit word reading instruction to increase their ability to read and comprehend texts. Overall, according to Oslund et al.'s (2018) study, struggling readers need explicit instruction in vocabulary and word reading in order to increase their reading comprehension abilities, but proficient readers mainly just benefit from vocabulary instruction.

Oslund et al. (2018) explored how vocabulary and word reading interventions can increase reading comprehension whereas Lupo et al. (2019) focused on a different way to increase reading comprehension. Lupo et al. explored the effects of text-difficulty on reading comprehension in adolescents. They started out by explaining two points of view regarding text difficulty. The first being that if students struggle when reading a text at or above grade level, they should be given easier texts to assist with comprehension and motivation. On the other hand, giving students texts below their grade level could be counterproductive. The second point of view believes that students should be given texts at or above their grade level, supplemented with scaffolding and teacher support to continue their growth of vocabulary and comprehension.

Lupo et al.'s conducted their study on 293 students in ninth grade with the hopes of discovering that with the right supports, students can be given texts at or above their grade level and still be successful.

To measure text comprehension, Lupo et al. (2019) assigned comprehension questions for each text students read. They also measured overall comprehension using the *Gates-MacGinitie Reading Tests.* Students were split into two groups, those who were given easier texts, and those who were given harder texts. Both groups received supplemental reading supports for their texts in the form of KWL and Listen-Read-Discuss strategies. The key findings of this study indicated that regardless of text-difficulty, all students made gains in their reading comprehension. With that said, Lupo et al. noted that a subgroup of readers who were deemed significantly below grade-level in reading benefited more from the easy texts. Upon further evaluation, Lupo et al. noted that 61% of the students in the below grade-level subgroup were English Learners (ELs). Since many EL students are still developing their English proficiency, it is a lot harder for them to follow along with grade level texts. Lupo et al. indicated that the easier texts had simple sentences, were shorter, and contained more familiar words which made it easier for this particular group of students to follow and comprehend. In sum, Lupo et al. (2019) demonstrated that most students are capable of improving their reading comprehension regardless of text difficulty so long as they have the right supports within the classroom to guide their reading.

Lupo et al. (2019) looked at how text difficulty affected reading comprehension, but Barth and Elleman (2017) explored a different intervention and its effects on reading comprehension. Barth and Elleman conducted a study on how teaching inference interventions increase the reading comprehension and achievement of middle school students who struggle with reading. One of the biggest struggles many teachers face is that a majority of secondary students are

below proficient in reading level. Barth and Elleman pointed out that the ability to comprehend texts is often expected in the secondary grades, but to comprehend texts students need to be able to decode, read fluently, and understand vocabulary. Without these skills, students will not understand what they read. In their study, Barth and Elleman believed that making inferences while reading a text can greatly improve reading comprehension for secondary students. Barth and Elleman described inference making as a process where students integrate what they already know and any general knowledge they have about a topic while reading a text. By practicing inference making, students are increasing their reading strategies, vocabulary skills, and background knowledge on a topic, thus increasing their reading comprehension. Barth and Elleman conducted their study on a sample size of 66 middle-school students who struggle with reading to examine how effective inference interventions are on increasing reading comprehension and text-based knowledge.

Barth and Elleman (2017) broke their sample size into two groups: the treatment group who received the inference interventions and the comparison group who followed the normal reading curriculum. The interventions that were used in the treatment group involved teaching students to use textual clues, integrate prior knowledge, try to understand character perspectives, and understand the author's purpose for writing (Barth & Elleman, 2017). To measure progress, Barth and Elleman used the *WIAT-III Reading Comprehension subtest*, the Egyptian Content Knowledge Assessment, and the QRI-5. The key findings of the study indicated that first, students in the treatment group significantly increased their Egyptian content-knowledge, the unit of study at the time of interventions. Secondly, while students made gains in inference-making skills, there was no significant difference between the treatment and comparison groups. The last finding of this study indicated that students in the treatment group did, overall, greatly

increase their reading comprehension achievement. Barth and Elleman's (2017) study displayed that explicitly working on inference interventions can benefit struggling readers in growing their content knowledge and can help increase their reading comprehension.

Adult Interventions

Even if a reading strategy was designed to work for primary and secondary students, many adults leave school as struggling readers and many adults can still benefit from reading intervention. Gray et al. (2018) investigated how teaching morpho-phonemic interventions to adult struggling readers affected their reading achievement. Many students have persistent reading struggles throughout their entire educational careers. Gray et al. noted that about 20% of high school students in America end up dropping out of school altogether. That is why the researchers of this study investigated how to support adults who struggle with reading. Gray et al. studied a sample of 34 students who were working on receiving their General Educational Development (GED) certification. They split the sample size into two groups, an experimental group who received morpho-phonemic interventions and a control group. Gray et al. hypothesized that the experimental group would show higher achievement than the control group on word recognition measures and standardized reading tests.

Gray et al. (2018) used the Letter Word ID, Reading Vocabulary, and Passage Comprehension subtest from the *Woodcock Johnson-III*; the visual patterns measure from the *Test of Nonverbal Intelligence-4*; and Picture Naming and Verbal Analogies subtests from the *Woodcock-Munoz Language Survey-R* to measure progress in their study. The key findings indicated that both the experimental and control group increased their ability to read words, spell words, match definitions, and complete sentences. With that said, as predicted, the experimental group who received morpho-phonemic interventions made significantly greater progress on

identifying base words, letter word identification, and decoding. Gray et al. also reported that there were no significant differences on the standardized tests of vocabulary spelling, and comprehension skills between the groups. Overall, the experimental group in Gray et al.'s (2018) study were able to better identify, decode, and read words after receiving morpho-phonemic interventions showing that adults can still greatly benefit from reading interventions.

Gray et al. (2018) focused on GED students and how to increase their reading skills. Pergams et al. (2018) conducted a similar study on students in a college biology class who struggled with reading their textbook. Pergams et al. researched the effects of the read-aloud and think-aloud strategies on college level biology students. In their study, Pergams et al. noted that the reading aloud (RA) strategy is commonly used to help younger students develop strong reading skills. Because of this, RA is rarely used above the elementary school level and there are hardly any research studies on its effects for older students. Pergams et al. hypothesized that RA would help the biology students to better understand and interpret information within their textbook. Pergams et al. took the RA in conjunction with the thinking aloud (TA) strategy and applied them to three college biology courses. They used a sample size of 34 students across three biology classes to see how the RA and TA strategies affected the college-aged students' reading abilities.

Pergams et al. (2018) used student and teacher surveys to measure the effects of the RA and TA strategies in the three biology classes. The key findings from this study suggested that the RA and TA strategies were much preferred by the students than a typical lecture-based biology class. The students reported that they felt more engaged and interested in the content when using RA and TA. They also reported that after the interventions they felt they were more comfortable and better equipped to read textbooks that are normally difficult for them. Over the course of

Pergams et al.'s study, the RA and TA strategies taught the sample students how to interact and interpret difficult academic texts. With that said, Pergams et al. noted that the RA and TA strategies are most effective in smaller groups of 15 or fewer students. They also stated that many college instructors stated that they were hesitant to use these strategies in their classrooms despite the positive results due to the pressure to cover a broad amount of material in such a short amount of time. In sum, Pergams et al. (2018) showed how reading strategies that are normally used in elementary levels of education can be effective for older students.

Interventions for Students with Disabilities and English Learners

When exploring the types of interventions that best help struggling readers, one must consider unique groups of students who often have unique struggles. This section will explore reading interventions that may be helpful for students with disabilities and English learners.

Students with Disabilities

Although many students struggle with reading, it is important to take a closer look at students with disabilities and what best helps them to be successful in improving their reading skills. Khasawneh and Alkhawaldeh (2020) conducted a study on the effects of phonological awareness and sequential memory training for students with learning disabilities (LD) to better improve their reading achievement. Khasawneh and Alkhawaldeh noted that it takes a lot more effort for students with LD to decode and identify the words and patterns they are reading, and this often leads to a loss in reading comprehension and a loss in the ability to grow and advance in their reading skills. Khasawneh and Alkhawaldeh believed that phonological awareness, the ability to recognize sounds in words and phrases, is one of the most basic reading skills that needs to be mastered to build up to eventual reading mastery. The point of Khasawneh and Alkhawaldeh's study was to develop an instructional program specifically for students with LD

that focused on phonological awareness skills and sequential memory to help students with LD to improve their reading achievement. Khasawneh and Alkhawaldeh conducted their study on a sample size of 326 students with LD across grades three through six. They split the sample size into two groups, a control group and an experimental group, to better study the effectiveness of their instructional program.

To measure progress, Khasawneh and Alkhawaldeh (2020) used the Phonetic Sequential-Memory test, along with pre- and post-tests of the skills they worked on during the instructional program. The phonological awareness program was used on the experimental group and the control group used their school's normal reading curriculum. The key findings of the study indicated that students in the experimental group had greater self-confidence in their phonological awareness skills and their phonological awareness achievement was much higher than the control group. With that said, the results of the sequential memory tests between the control and experimental group were not very different. Because there was little difference in sequential memory between groups, Khasawneh and Alkhawaldeh stated that there needs to be more research on the relationship between sequential memory and reading skills. Overall, by focusing specifically on phonological awareness skills, Khasawneh and Alkhawaldeh (2020) showed that students with learning disabilities could greatly improve their reading and get one step closer to reading mastery.

Khasawneh and Alkhawaldeh's (2020) study focused on the foundational reading skill of phonological awareness, but MacArthur et al. (2015) looked at the foundational skills of phonics and sight word training in their study. MacArthur et al. studied the effects of sight word interventions versus phonics training on reading achievement for students with dyslexia. For students with dyslexia, most reading interventions involve explicitly teaching phonics,

connecting letters to sounds. MacArthur et al. stated that phonics training could be beneficial to students with dyslexia, but they also believed that explicitly teaching sight words would increase reading achievement for these students. Sight words are often words that do not follow typical phonics rules. Many of the letters and sounds are irregular and need to be memorized rather than decoded using phonics techniques. MacArthur et al. noted that one third of English words do not follow general letter-sound rules. For their study, MacArthur et al. split a sample size of 104 students with dyslexia between the ages of 7 and 12 years old into three groups. The first group received eight weeks of phonics training followed by eight weeks of sight word training. The second group received the opposite, eight weeks of sight word training followed by eight weeks of phonics training. The third group received a mixed approach where they had alternating days of phonics and sight word training for 16 weeks. With the three intervention groups, MacArthur et al. wanted to observe which order of intervention training was most important in helping students with dyslexia increase their reading achievement.

To measure, MacArthur et al. (2015) used the *Test of Word Reading Efficiency* and the *Test of Everyday Reading Comprehension*. They also used the intervention data from the 16 weeks of phonics and sight word training. The key findings indicated first that 16 weeks of sight word and phonics training in general significantly increased dyslexic students' abilities to read sight words and use phonics strategies independently. Another key finding in MacArthur et al.'s study indicated that training phonics before sight word reading had a larger effect on reading achievement than the inverse approach. With that said, MacArthur et al. noted that students with dyslexia should not just receive phonics training. Based on the results of their study, MacArthur et al. (2015) recommended that students with dyslexia should have both phonics training and sight word training concurrently to increase their word reading abilities.

Much like MacArthur et al. (2015), Mulé et al. (2015) also researched sight words in their study. Mulé et al. researched the effectiveness of two sight-word interventions on a student with autism spectrum disorder (ASD). Mulé et al. noted that appropriate instructional strategies could be difficult to identify for students with very specific educational goals, especially because there is limited research on reading interventions that work for students with ASD. In their study, Mulé et al. compared traditional drill practice (TDP) and incremental rehearsal (IR) to see which intervention is most effective in increasing sight word knowledge. Both strategies require using flashcards, but the biggest difference is that TDP used all unknown words and IR used mostly known words and gradually added unknown words to the pile. For their study, Mulé et al. (2015) used one seven-year-old student with ASD to gauge which intervention worked best in helping the student retain and generalize sight words.

To measure sight word recognition, Mulé et al. (2015) used the sample student's instructional data from 21 sessions of sight word practice with the two strategies. The student had three sessions per week. For generalization measures, the researchers used sentences containing the sight words to see if the student was able to recognize them in context. The key findings of this study indicated that although both TDP and IR were effective strategies, but TDP was more efficient in helping the student learn and generalize sight words. Mulé et al. recognized that conducting this study on just one student does not leave a lot of room to generalize their data, especially because students with ASD have such a wide variety of abilities, but the researchers hoped that similar studies would be conducted in the future with larger samples of ASD students. Overall, Mulé et al. (2015) showed that specific sight word interventions, particularly TDP, work to help students with ASD to better recognize and generalize new words.

The three previous studies focused on foundational reading skills, but Roux et al. (2015) moved past foundations and looked directly at reading comprehension, the overall goal of reading intervention programs. Roux et al. conducted a study on the effects of teaching explicit reading comprehension interventions on the improvement of reading achievement for struggling readers with autism spectrum disorder (ASD). Reading comprehension is a vital skill that students need to be successful as they progress through school. Unfortunately, students with ASD often have struggles that involve reading comprehension and it makes it harder for this group of students to improve their reading achievement. Roux et al. believed that teaching explicit reading comprehension strategies to students with ASD would improve their reading comprehension abilities and help them to be successful with complex reading tasks. Roux et al. conducted their study on a sample size of 45 elementary school students who all had high-functioning ASD. The 45 students were randomly assigned to either an intervention group or a control group. The students in the intervention group received explicit reading comprehension instruction whereas the control group continued with their usual reading curriculum.

Roux et al. (2015) measured progress through oral assessments in the areas of vocabulary knowledge, identification of main idea in a passage, recognition of anaphoric relations, and overall comprehension of a passage. The key findings of Roux et al.'s study indicated that students in the intervention group, compared to the control group, greatly increased their vocabulary knowledge and their abilities to identify the main idea in a passage. The intervention students also showed some signs of improved anaphoric relationship recognition between pronouns and nouns. Roux et al. conducted a follow-up assessment on the sample students at the start of the next school year to see if they retained what they had learned in their intervention sessions. Unfortunately, many students did not retain what the interventions taught them the

previous year, which Roux et al. interpreted as an indicator that students with ASD most likely need ongoing interventions in comprehension throughout their schooling. To conclude, Roux et al.'s (2015) study indicated the importance of ongoing, explicit interventions for students with ASD in order to increase their reading comprehension achievement.

Just like Roux et al. (2015), Swanson et al. (2018) focused on the skill of reading comprehension. Swanson et al. researched how certain interventions increase reading comprehension achievement in students with who display inattention and hyperactivity disorders. Reading struggles can be apparent in students who have inattention or hyperactivity disorders. Since the goal of reading interventions is to create students who can independently read and comprehend texts, Swanson et al. investigated how working memory, decoding, making inferences, and vocabulary knowledge predict reading comprehension outcomes for secondary students who exhibit either inattention, hyperactivity, or both. They used a sample size of 414 students across four school districts to conduct their study.

The measures Swanson et al. (2018) used were the *Test of Word Reading Efficiency*, the *Woodcock Johnson-III*, the *Goldman-Fristoe-Woodcock Auditory Memory Tests*, the *Gates-MacGinitie* test, and the Bridge-IT task. The key findings indicated that first, vocabulary and inference making skills positively predicted student reading comprehension achievement for students with low inattention and hyperactivity, high inattention and hyperactivity, and low inattention with high hyperactivity. With that said, Swanson et al. noted that decoding skills were not a predictor of reading comprehension outcomes. Swanson et al. also discovered that a student's working memory could be a positive predictor of reading comprehension outcomes. Due to these findings, Swanson et al. (2018) recommended that students who have inattention

and hyperactivity of any level should be provided explicit vocabulary and inference making instruction to increase reading comprehension achievement.

English Learners

Just like the above studies on students with disabilities, it is just as important to investigate what best helps students who are English Learners (ELs) improve their English reading abilities. Edwards and Lambros (2018) conducted a study on how video self-modeling (VSM) might help dual language learners (DLLs) and students with disabilities increase their reading fluency. Edwards and Lambros defined video modeling as a technique that uses a recording of a student modeling a target behavior that is played back to the student to provide a personalized visual of the behavior. VSM is used as an oral reading fluency intervention by first having a reading teacher read a passage one sentence at a time while the student repeats the sentences back. The video is then edited to remove the reading teacher's voice and focus just on the student "fluently" reading the passage. Then, the video is played for the student so they can listen and read with themselves. Edwards and Lambros conducted their VSM study on a small sample size of three seventh grade students who were all DLLs and had disabilities. The three students were chosen because they all were reading English well below grade level. Edwards and Lambros used VSM on these students with the hopes of increasing their reading fluency skills.

Edwards and Lambros (2018) used *Dynamic Indicators of Basic Early Literacy Skills* (DIBELS) to measure the oral reading fluency of their sample size. They also use the *Adolescent Motivation to Read Profile* survey (AMRP) to gauge the self-concept while reading their chosen sample. Edwards and Lambros began with gathering baseline data. Then they provided VSM as an intervention strategy and continuously monitored progress for seven weeks. By the end of the study, the key findings indicated that all three participants improved their reading fluency by

almost an entire grade level on the DIBELS measure. Two of the three students also increased their self-concept and confidence as their reading fluency increased. With that said, Edwards and Lambros reported that if the study did not solely focus on fluency and other foundational reading interventions were involved, the students might have shown greater improvement in their reading abilities. Overall, Edwards and Lambros (2018) proved that VSM could be a useful technique that gives DLL students and students with disabilities a chance to see themselves as fluent readers while improving their reading fluency and achievement.

Much like Edwards and Lambros (2018), Gan et al. (2019) focused on reading interventions for students who are English Learners. Gan et al. conducted a single-case study to examine how specific reading interventions might be effective for a student learning English as a second language (ESL). The whole-language approach is most often used in ESL and EL programs. The whole-language approach involves completely immersing a student in the new language environment. Unfortunately, this approach does not always work for struggling readers. Gan et al. believed that reading interventions are necessary for ESL students who struggle to boost their abilities and confidence in learning English. In their study, Gan et al. used a single student identified as being well below his peers in reading. They hoped to discover how intensive, individualized interventions affected the single ESL student's English reading achievement.

To measure progress, Gan et al. (2019) used correct words per minute (CWPM) probes and word recognition data from a flashcard intervention. They conducted a total of seven 45-minute intervention sessions with the sample student. The key findings indicated that providing the student with individualized interventions was effective. The sample student was able to greatly increase his letter-sound correspondent, decoding, and English reading fluency. Overall, the Gan

et al. (2019) study stressed the importance of individualizing interventions for students who struggle, especially if they are learning a new language.

The Effects of Motivation on Reading Achievement

Student engagement and motivation are important factors to consider when looking at reading achievement. Klauda and Guthrie (2014) conducted a study on the connection between motivation, engagement, and reading achievement and how these things might differ among struggling and advanced adolescent readers. Klauda and Guthrie first differentiated motivation and engagement, explaining that *motivation* is a set of values and beliefs about a category, such as reading, whereas *engagement* is behavior, such as effort and persistence, that students display while working on that category. It is also important to note that motivation for reading is multidimensional and has a lot of different constructs, such as intrinsic motivation, value for reading, peer value for reading, and self-efficacy (Klauda & Guthrie, 2014). The study predicted, "motivation facilitates engagement, which in turn facilitates achievement" (Klauda & Guthrie, 2014, p. 240) and that there would be a difference in the achievement outcomes and motivation among advanced versus struggling readers. It is also noted that struggling readers might "have serious cognitive challenges that make the acquisition of reading laborious and difficult" (Klauda & Guthrie, 2014, p. 240-241). Klauda and Guthrie conducted their study with a sample size of 205 seventh grade students with the hope of finding if there are developmental gaps in the influences among motivation and engagement on reading achievement among struggling and advanced readers.

The methods used in Klauda and Guthrie's (2014) study involved pairing struggling readers with advanced readers who had similar backgrounds such as socioeconomic status, gender, and ethnicity. Additionally, students were chosen based on whether they scored

significantly below and significantly above grade level for reading. The study measured collected data from two different points in the year, September and April, and data was collected by the students' language arts or reading teachers via The Motivation for Reading Information Books-School Questionnaire (MRIB-S) and various reading achievement tests such as the *Woodcock-Johnson III Diagnostic Reading Battery* and the *Gates-MacGinitie Reading Test* (Klauda & Guthrie, 2014). The key findings of this study indicated that first, "both motivation and engagement predicted achievement more strongly for advanced readers than struggling readers" (Klauda & Guthrie, 2014, p. 262). This supported the initial prediction that cognitive challenges caused struggling readers to have lower motivation and engagement, thus it limited their "capacity to increase their achievement" (Klauda & Guthrie, 2014, p. 262). The study also indicated that students who were intrinsically motivated often had higher achievement and struggling readers who were motivated had an increased engagement in reading, but the achievement differences were still higher for advanced readers. This could point to the idea that even if motivation is higher, the struggling readers need more time and attention than the advanced readers to practice reading skills to better improve their achievement, primarily due to their potential cognitive difficulties. Overall, Klauda and Guthrie's (2014) research study showed that "motivation and engagement may not facilitate achievement as readily for low-achievers as for other students" (p.267).

While Klauda and Guthrie's (2014) study focused on the difference in motivation among struggling readers and advanced readers and how that affected their reading achievement, Louick et al.'s (2016) study looked into how middle school students' belief in their own abilities affected their reading comprehension achievement. Louick et al.'s study used the "Expectancy-Value Model of Motivation" (p. 260). This model implied that students who believe they are capable of

being successful in completing a task are more likely to be engaged in and value that task. Louick et al. split the Expectancy-Value Model into three core constructs: "Self-efficacy, intrinsic motivation, and extrinsic motivation" (p.260). These three nuances of motivation contribute to a student's value of a task, such as reading, and when they have self-efficacy, they are more likely to be motivated and engaged in that task, thus they increase their reading achievement. For the study, Louick et al. used a sample size of 112 students from two different middle schools, one urban school (Kennedy) and one semi-urban school (North), to determine how self-efficacy and motivation among adolescents affected their reading comprehension achievement.

To measure student reading comprehension, Louick et al. (2016) used the *Gates MacGinitie Reading Test-4 Comprehension.* To measure motivation, the Motivations for Reading Questionnaire (MRQ), was used. The key findings of this study were first, that "students who were more self-efficacious were predicted to have higher reading comprehension" (Louick et al., 2016, pg. 266). With that said, Louick et al. discovered that although students at Kennedy, the urban setting school, demonstrated higher motivation, students at North, the semi-urban school, still had higher reading achievement. The study also noted that students at Kennedy actively avoided reading tasks more often than North despite reporting higher motivation for reading. Louick et al. assumed that this was because students at Kennedy struggled with decoding, a foundational reading skill, more than the students at North and the students at North consistently tested higher for reading achievement compared to the students at Kennedy before the study was conducted. To conclude, Louick et al.'s (2016) study emphasized the importance of a multidimensional approach to studying motivation and indicated that there is

still room to research and explore how exactly motivation plays a role in student reading achievement.

Louick et al.'s (2016) study used the Expectancy-Value framework to see how the nuances of motivation affected student reading comprehension achievement, and they left a lot open to further research. Gilson et al.'s (2018) study used the same framework as Louick et al. but looked more closely at the multidimensions of motivation in adolescent readers who struggle. The idea is that people are more likely to be motivated to do an activity if they have the mindset that they will succeed or have value in that subject. The premise of Gilson et al.'s Expectancy-Value theory was that students are motivated to read for two reasons. First, if they believe they can be successful and if they expect to have future success in reading, they will be motivated. Second, if they view reading as something that is important, useful, or enjoyable, they are more likely to be motivated. This group of researchers conducted their study with a sample size of 34 sixth-grade students in two different language arts classes who were chosen due to their below grade level achievement for reading with the hopes of finding how students' motivation for reading changed based on multicomponent reading and motivational interventions.

Gilson et al.'s (2018) method of study was to use an adapted model of the Adolescent Motivation to Read Survey-Conversational Interview (AMRP-CI), along with individual interviews with the teachers and the chosen sample of students to get an inside look at student perceptions of reading and nuances of motivation throughout the school year. Of the 34 students, 16 were in the group that would receive reading and motivational interventions and 18 were in the "business as usual" group. The key findings of this study first indicated that students preferred and valued reading narrative texts over informational texts, especially when those texts involved action, suspense, or cliffhangers. If students chose informational texts, it was primarily

due to an interest in the topic of the text. After interventions, students in the experimental group were more interested in choosing informational texts whereas students in the control group still preferred narratives. Another key finding from this study was that if teachers, peers, and loved ones showed a value for reading, modeled reading, read with the students, read aloud to the students, or recommended specific books, students' motivation to read increased. This motivation level was the same for the group receiving interventions and the "business as usual" group. Gilson et al. found in the "business and usual" group that "Students' reasons for not reading books included a lack of value for reading and a lack of books they wanted to read" (p. 517). Motivation for reading, according to Gilson et al. (2018), comes from the level of interest in the topics or narrative along with having important relationships with people who demonstrate a value for reading.

Gilson et al.'s (2018) study looked at a small sample size of students to determine the nuances of motivation when it comes to reading. On the other hand, Cho et al.'s (2018) study looked at the nuances of mindset, achievement goals, and engagement to study how they may improve student motivation and, in turn, improve reading comprehension. Cho et al. drew the focus of their study on the Achievement Goal Theory. This theory involved focusing on growth in one's reading abilities rather than focusing on grades or performance compared to other students. In this goal theory, it is important to consider the growth versus fixed mindset of students, along with the multidimensions of student motivation. This study worked with a sample size of 107 fourth and fifth-grade students to try and understand the impact of achievement focused learning on student motivation, along with the relationship this has on student's reading comprehension achievement.

Cho et al. (2018) used individual surveys, The Patterns of Adaptive Learning Strategies measure, and academic testing including the *Woodcock Johnson III Passage Comprehension* and the *Gates MacGinitie Reading Test-4 Comprehension* to complete their research study. They also used the Academic Competence Evaluation Scale on students' teachers. The key findings of this study indicated that students who adopt a fixed mindset approach are more likely to avoid challenging reading tasks and potential failure, thus they do not improve their reading comprehension. To contrast this, Cho et al. noted that students with a growth mindset were more likely to be motivated, thus improving their reading comprehension. Another finding of this study was that when students and teachers focused on achievement goals rather than performance goals, it increased student's emotional engagement in reading, promoted growth mindset, and improved intrinsic motivation. This, in turn, led to better reading comprehension. In sum, Cho et al.'s (2018) study indicated that a focus on a student's growth and learning rather than a focus on performance increased student motivation and resulted in an increase in reading comprehension achievement.

Comparable to Cho et al.'s (2018) ideas of "Achievement Goal Theory", Orkin et al. (2018) focused on improving the intrinsic motivation of students to create positive academic outcomes, especially for reading achievement. In their study, Orkin et al. used the framework of "Self-Determination Theory" (SDT). This theory looked at how students who are externally motivated are more likely to avoid difficult academic tasks over time whereas students who are internally motivated are more likely to engage in difficult academic tasks. Orkin et al. explained that students as early as elementary school who struggle with reading are more likely to avoid reading tasks compared to their non-struggling peers. On the contrary, SDT tied in the idea that when students are intrinsically motivated in reading tasks, they are more engaged, and their

reading achievement increases. Orkin et al. conducted their study on a sample size of 47 students between the ages of 7 and 10 years old who were in a remedial reading program to discover how effective intrinsic motivational strategies were on reading engagement and achievement.

Orkin et al. (2018) used the *Woodcock Reading Mastery Tests* and the *Standardized Reading Inventory- 2* to measure student reading achievement. Motivation and classroom behavior were measured through classroom observations using the Observing Patterns of Adaptive Learning survey. The sample size was split into two groups. The first was a control group who received normal reading instruction and an external motivation intervention of a classroom token economy. The second was the intervention group who used the same reading curriculum as the control group, but instead of a token economy, the instructors used evidence-based intrinsic motivational strategies developed by Responsive Classroom. The key findings of this study indicated that the control group seemingly progressed farther in the reading curriculum, but the intervention group had higher reading achievement despite not getting through as much of the curriculum. Orkin et al. discovered that the students who received intrinsic motivational strategies demonstrated an increase of reading engagement and decreased their rate of avoidance behavior. This increase of reading engagement led to higher reading achievement scores in the intervention group. Another key finding in this study was that students in the intervention group spent less time receiving explicit literacy instruction than the control group. Orkin et al. assumed that the intervention group internalized the intrinsic motivational strategies, and this caused them to engage in reading tasks outside of school more often than the control group. Overall, Orkin et al.'s (2018) study signified students who were intrinsically motivated were less likely to avoid difficult reading tasks and more likely to be engaged in their learning inside and outside of the classroom, thus leading to higher reading achievement.

Orkin et al.'s (2018) study focused on intrinsic motivation, which is very similar to growth mindset, the focus of Petscher et al.'s (2017) study on motivation and reading achievement. Petscher et al.'s study explored the differences between specific and global mindset centered around reading and how growth mindset affected reading achievement outcomes. The term "mindset" means a person's ideas of whether their intelligence and abilities are able to be grown or if they believe their intelligence and abilities are stagnant. Petscher et al. cited that a person who has a fixed mindset believes that their intelligence and abilities are stagnant and cannot expand. On the other hand, a growth mindset is the belief that one's abilities can grow and be developed. Petscher et al.'s hypothesis was that students with a growth mindset would have higher reading comprehension achievement than those with a fixed mindset. They conducted their study on a sample size of 195 fourth-grade students chosen from six different elementary schools in order to measure the effects of mindset on academic achievement.

Petscher et al. (2017) measured growth mindset in students using the Student Mindset Survey. To test reading achievement, they used *the Woodcock-Johnson Test of Achievement -3*, the *Gates-MacGinitie Reading Test,* and the *Test of Silent Reading Efficiency and Comprehension*. The key findings of Petscher et al.'s study were that students with a global growth mindset usually had higher reading comprehension scores. This could also be turned around and students who usually scored well in reading comprehension outside of the study generally exhibited signs of a growth mindset. On the other hand, students who scored lower on reading comprehension were more likely to exhibit a fixed mindset regarding their reading abilities. Petscher et al.'s (2017) study indicated that growth mindset directly correlates to higher reading comprehension scores, but they also note that "mindset is multidimensional" (p. 24),

meaning that more research should be done about mindset and its effects on specific academic areas of achievement.

The previous research studies focused on mindset to improve motivation, but Mehigan (2020) took a different approach. Mehigan explored how reading fluency instruction affected the motivation of struggling readers. Many students who struggle with reading and have experienced failure often avoid difficult reading tasks because they do not want to fail again. One of the foundational reading skills that students need to be proficient in to be successful later on is reading fluency. The best way to increase reading fluency achievement is through continuous practice and repetition. Mehigan used this idea in her study and believed that success and motivation go hand and hand. If students experience success in the things they struggle in (reading fluency), they will be more motivated to work and engage in that task. Mehigan conducted her motivation study on a sample size of 15 first-grade students who struggle with reading.

To measure motivation, Mehigan (2020) used the Young Reader Motivation Questionnaire (S-YRMQ). She also surveyed the students' teachers based on their instructional observations. For the study, teachers focused on reading fluency interventions with students. The key findings indicated that by increasing their reading fluency abilities, all students gained confidence. This confidence, in turn, led to them being more motivated to participate in future reading tasks. Mehigan stated that "success begets success" (p. 16). What she meant by this was, since students felt successful in their reading abilities, they were more likely to willingly engage in reading tasks, thus they continued to grow their abilities and be successful. Generally, Mehigan's (2020) study indicated that focusing on the reading skills students struggle with can

help them to feel more confident in their abilities and they will be motivated to continue working on their reading achievement.

Conclusion

Three key sections were highlighted in this chapter when researching interventions and reading achievement outcomes for secondary struggling readers. The first section focused on reading intervention research that primarily looked at how foundational reading interventions increase reading achievement. The second section in this chapter focused on reading interventions that worked well for students with disabilities or who are English learners. The third section focused on student motivation and how motivation can affect reading achievement outcomes. Overall, this review of literature will guide the discussion and implications in chapter three on what teachers can do to best help secondary struggling readers.

CHAPTER III: DISCUSSION AND SUMMARY

Summary of Literature

The research repeatedly states how important it is to identify and target reading struggles early in order to better help students to be successful when they move into secondary grades and beyond (Bratsch-Hines et al., 2020; Hawkins et al., 2015; Jefferson et al., 2017; Mendez et al., 2016; Miciak et al., 2018; Mulé et al., 2018; Wu & Gadke, 2017). Even with early intervention programs such as response to intervention (RTI) and targeted reading intervention (TRI) in place (Bratsch-Hines et al., 2020; Jefferson et al., 2017; Mendez et al., 2016; Mulé et al., 2018), many secondary students go through middle and high school still struggling with foundational reading skills. On top of that, students with disabilities or who are English Learners (ELs) repeatedly fall behind general education students when it comes to reading achievement. This is often due to the nature of the students' disabilities or their level of English proficiency. Like most struggling secondary readers, many students with disabilities or ELs struggle the most with learning and retaining foundational reading skills. The research summarized in chapter two on struggling readers and on students with disabilities and ELs indicated how important it is to individualize reading interventions and instruction to meet the unique needs of all secondary struggling readers (Barth & Elleman, 2017; Bratsch-Hines et al., 2020; Edwards & Lambros, 2018; Gan et al., 2019; Gray et al., 2018; Hawkins et al., 2015; Jefferson et al., 2017; Khasawneh & Alkhawaldeh, 2020; Lupo et al., 2019; MacArthur et al., 2015; Mendez et al., 2016; Mickiak et al., 2018; Mulé et al., 2015; Mulé et al., 2018; Oslund et al., 2018; Pegrams et al., 2018; Roux et al., 2015; Swanson et al., 2018; Wu & Gadke, 2017).

The purpose of this literature review was to explore how teachers can better support their struggling secondary readers. If early intervention programs and strategies work for elementary

students in increasing foundational reading achievement, then early intervention programs and strategies should also be able to work with secondary students who struggle with foundational reading skills. Gan et al. (2019) and Bratsch-Hines et al. (2020) both focused on how targeted interventions can greatly improve the reading outcomes of struggling readers, especially if the interventions focus on the specific needs of the student. Bratsch-Hines et al. (2020) investigated the foundational skill of phonological awareness interventions, much like Khasawneh and Alkhawaldeh (2020), who also investigated this skill specifically for students with learning disabilities. In both cases, intensive phonological awareness interventions greatly increased student reading achievement. Gan et al. (2019) proved that with the help of targeted reading interventions students who are ELs were more successful in English decoding, reading fluency, and phonics. Similarly, MacArthur et al. (2015) investigated how phonics training in concurrence with sight word training can really help students with dyslexia to increase their word reading abilities. A study by Gray et al. (2018) investigated how morpho-phonemic interventions increased word identification and decoding skills for adults who struggle with reading. If these interventions worked for adults and for elementary aged students, then phonics, phonological awareness, decoding, and sight word interventions are all important tools that should be used in secondary curriculum for students who also struggle with these same foundational reading skills. (Bratsch-Hines et al., 2020; Gan et al., 2019; Gray et al., 2018; Khasawneh & Alkhawaldeh, 2020; MacArthur et al., 2015).

Many of the above foundational reading skills and interventions teach students how to identify and read words, thus it is important to also look at specific reading fluency and vocabulary interventions. Mendez et al. (2016) and Mulé et al. (2018) focused on how targeted Tier 2 reading interventions can increase reading fluency and vocabulary skills in struggling

readers. Mulé et al. (2015) compared traditional drill practice (TDP) to incremental rehearsal and found that TDP works well when it comes to helping students with autism spectrum disorders (ASD) to improve their reading fluency. Another specific reading fluency intervention that was proven to work for EL students by Edwards and Lambros (2018) was video self-monitoring (VSM). Wu and Gadke (2017) researched repeated readings (RR) versus VSM and noted that RR greatly increased reading fluency in struggling readers. Hawkins et al. (2015) also investigated reading fluency achievement through the comparison of listening while reading (LWR) and RR. They found that both interventions work well in increasing reading fluency, but there was a faster increase in fluency abilities when students used LWR. To increase word recognition and vocabulary, Oslund et al. (2018) compared struggling to proficient readers. They found that all readers regardless of ability benefit from vocabulary instruction, but struggling readers also benefit from explicit word reading and vocabulary interventions. Struggling readers of all ages and ability levels can greatly improve their reading fluency and vocabulary skills by receiving vocabulary instruction and targeted reading fluency interventions (Edwards & Lambros, 2018; Hawkins et al., 2015; Mendez et al., 2016; Mulé et al., 2015; Mulé et al., 2018; Oslund et al., 2018).

The goal of intensive reading interventions is to eventually help students independently read and comprehend texts; thus, Swanson et al. (2018) focused their study on the types of interventions that predict reading comprehension outcomes for students with inattention or hyperactivity. They found that targeting vocabulary and inference instruction can help to improve student reading comprehension achievement. Barth and Elleman (2017) also investigated reading comprehension and discovered that explicitly teaching students how to inference can greatly increase content knowledge and reading comprehension. Roux et al. (2015)

investigated how teaching vocabulary and how to identify the main idea of a passage to students with autism spectrum disorder (ASD) helped to also increase their abilities to comprehend what they read. Lupo et al. (2019) investigated the difficulty of a text and discovered that with the right interventions and supports, students can comprehend texts above or below their level, except for ELs. Lupo et al. stated that ELs should receive texts below grade level that have easier vocabulary words and simpler sentences to increase their English reading comprehension. Pegrams et al. (2018) studied how read aloud and think aloud interventions increased the reading comprehension of college level students, particularly for informational texts. The next step for secondary struggling readers who have internalized foundational reading skills is to explicitly teach inferencing and vocabulary along with using strategies such as read alouds and think alouds to increase reading comprehension achievement (Barth & Elleman, 2017; Lupo et al., 2019; Pegrams et al., 2018; Roux et al., 2015; Swanson et al., 2018). All the interventions and strategies mentioned above are primarily used on elementary-aged students to target early reading struggles, but for middle and high school students it is just as important to meet them where they are at with their reading abilities. That means finding ways to incorporate early reading interventions and strategies into the secondary curriculum to meet the wide variety of reading needs students have.

Another important thing to consider when exploring how to best help secondary readers who struggle is student motivation and how that motivation affects reading achievement. First, it is important to note that motivation is multidimensional (Klauda & Guthrie, 2014). There are many nuances to motivation for students. Some of these nuances include intrinsic motivation, value for reading, peer value for reading, and self-efficacy. Gilson et al. (2018) and Louick et al. (2016) both claimed that motivation comes from an expectation to succeed and a general value of the

activity. One way students form a value for reading comes from loved ones, teachers, or peers who model reading or facilitate positive interactions with students involving reading, such as reading aloud to them or recommending a book. Cho et al. (2018) indicated that reading motivation comes from a focus on self-efficacy such as practicing growth mindset and focusing on student achievement and learning rather than on student performance. Orkin et al. (2018) mirrored this idea saying that student reading engagement comes from a place of intrinsic motivation, and Petscher et al. (2017) had similar views of how growth mindset increased motivation. In other words, students who find some value or interest in reading, have positive support from loved ones and teachers, and see reading not as a place to fail but a place to improve generally are more motivated to complete reading tasks (Cho et al., 2018; Gilson et al., 2018; Klauda & Guthrie, 2014; Louick et al., 2016; Orkin et al., 2018; Petscher et al., 2017).

Another aspect of motivation is that an increase in student motivation leads to an increase in student reading achievement. Cho et al. (2018), Orkin et al. (2018), and Petscher et al. (2017) indicated that when student motivation was high, this positively affected the outcomes of reading comprehension achievement. Similarly, Klauda and Guthrie (2014) found a correlation between an increase in motivation and an increase in reading achievement, but this was more prevalent in advanced readers versus struggling readers who may be dealing with cognitive challenges and need more supports. Mehigan (2020) believed that success and motivation go hand in hand and when students feel successful in reading, they are more motivated to be engaged in reading. Mendez et al. (2016) noted that students with parental involvement at home, thus increased motivation, had greater reading achievement than those who did not. Although Gilson et al.'s (2018) study focused strictly on motivation, it can be assumed that if this study included reading achievement tests, that they would have similar results to the other studies. That is because they

found an increased value in reading in students based on the multiple interventions of their study and if students demonstrated an increased value for reading, they would be more likely to engage in reading tasks. In sum, finding ways to motivate students and increase their value for reading will increase engagement in reading tasks and improve reading achievement (Cho et al., 2018; Gilson et al., 2018; Klauda & Guthrie, 2014; Louick et al., 2016; Mendez et al., 2016; Mehigan, 2020; Orkin et al., 2018; Petscher et al., 2017).

Limitations of the Research

Searches from Google Scholar, Academic Search Premier, ERIC, and ProQuest Education Journals were used in locating sources. Since the topics and ideas in this review focused on education, only educational-based search engines were used. One limitation of this review was the use of educational search engines. If other scholarly databases in education-related fields, such as psychology, were used, more sources with different ideas and points of view regarding disabilities may have been included in this study. The criteria for choosing and reviewing articles involved finding sources from peer-reviewed journals and books that focused on reading interventions and motivation for struggling readers. In this criterion, only journals and books published between the years 2015-2021 were chosen for the literature review. Another limitation to this review includes the publication date criteria. Being that only a span of six years was used there may have been older studies that could have contributed valuable ideas and points of view to this thesis.

Implications for Future Research

When considering all of the above research, there were a few gaps that should be addressed. First, more research in sequential and working memory and how memory affects reading outcomes might be an important next step in helping struggling readers. There were also

mixed results on the reading intervention of video self-monitoring, thus further research could help clear up some of the confusion on whether VSM is effective in increasing reading fluency. Much of the research had skewed results on how early reading interventions affect reading comprehension outcomes in students, thus, further research might be needed to address these gaps. Another area that may require more research is secondary students who are English learners and what teachers can do to better support them as only three studies were located on EL students. Lastly, although there is a lot of research around students with disabilities, many of the sample sizes are very small. Further research on students with disabilities that include larger sample sizes might shed some light on what works best in increasing their reading achievement.

Implications for Professional Application

The research shows how effective early reading intervention is in improving early reading skills in elementary school. The research also shows how important it is to identify and work on reading skills early to help students with future reading success. Unfortunately, many secondary students go into middle and high school still struggling with reading. If the above early reading interventions work for primary students, they should be able to work for secondary students. For whole-class or Tier 1 instruction, secondary teachers can explicitly teach vocabulary words not just by teaching definitions, but by also helping students understand how to read and pronounce the words. Secondary teachers can also help students with reading fluency and word recognition by using listening while reading (LWR). What this might look like is, teachers can read a text aloud while students follow along. For reading comprehension strategies, teachers can build background knowledge for a text and explicitly teach and model to students how to question and inference when reading. By frequently monitoring student progress through formative or summative assessments, teachers can better gauge where their students are at. For

students who are struggling or cannot keep up with whole-class or Tier 1 instruction, teachers might need to consider small group or Tier 2 interventions.

For small group or Tier 2 instruction, students should be grouped based on their ability levels or areas of need. These small groups are a chance for students to get supplemental practice in the area they need most. If a student is struggling with reading fluency, a teacher might provide them with repeated readings (RR), LWR, or video self-monitoring (VSM) interventions. If students are struggling with phonological awareness, decoding, and word recognition, teachers might provide students with traditional drill practice (TDP), sight word reading, or word sheets. The interventions primarily depend on what a student needs to work on. Something to keep in mind while providing interventions to students is to give them immediate corrective feedback. For example, if a student is working on RR and they read a word wrong, first have them pause and give them the correct word, then have the student read the word correctly three times in a row before continuing. Immediate corrective feedback will help a student to learn from their mistakes and continue to grow in their reading abilities. Tier 2 and small group instruction should also have frequent progress monitoring. Students who make great strides can often be pushed back into a whole-class instructional setting, but sometimes students still struggle after small group intervention and may need individual or Tier 3 interventions to more closely target their area of need.

For many struggling secondary readers, ELs, and students with disabilities, motivation plays a huge role in their success. The biggest way to boost motivation is through relationships. That can be teacher -to-student relationships, student-to-student relationships, or student-to-family or loved one relationships. Using these relationships can help students boost their motivation to participate in reading tasks and be more successful in the classroom. The research

suggests that teachers should encourage parental involvement at home to boost motivation. This often works better for younger students, but older students want to make their parents proud, and parents appreciate knowing what goes on in the classroom. Another way teachers can increase motivation in students is by focusing on their growth and progress rather than their grade, along with teaching students about growth mindset. Every student works at their own pace and learns in their own time. Teachers need to recognize student growth and focus on making progress towards student specific goals rather than focusing on student grades. Teachers should also help students to realize that their growth and progress is more important than their letter grade. Motivation can be different for each student or group, so it might take a while to find the strategy that works best. The research in this review highlights the importance of focusing on early reading interventions and motivation for secondary students who struggle with reading, including Els and students with disabilities.

Conclusion

When considering how to best help secondary struggling readers, it is important to investigate where a student's greatest area of need lies. For many students, their area of need falls into the foundational reading skills category. Many students who struggle with reading need more practice and support in foundational reading skills so they can eventually internalize them and move on to improving their reading comprehension. If a student does not have a grasp on foundational reading skills, then they will not be successful with more advanced reading skills and they are less likely to be motivated to engage in reading tasks. Some of the most beneficial things a teacher can do for all readers is to teach vocabulary, break down or scaffold lessons, and create multiple levels of support when reading a text with a wide variety of students. Something else teachers need to consider is how to engage and motivate their students in reading tasks. This

can involve reading aloud to them, getting parents involved in reading activities at home, and highlighting a student's progress and growth rather than their overall performance on a task. A student cannot be successful in reading if they do not have a solid grasp of the foundational skills. Secondary struggling readers especially need support in early reading skills before moving on to more advanced reading skills so they can become strong, independent readers.

References

Arias-Gundin, O. & Llamazares, A. G. (2021). Efficacy of the RTI model in the treatment of reading learning disabilities. *Education Sciences, 11*(5), 209. http://dx.doi.org.ezproxy.bethel.edu/10.3390/educsci11050209

Barth, A. E., & Elleman, A. (2017). Evaluating the impact of a multistrategy inference intervention for middle-grade struggling readers. *Language, Speech & Hearing Services in Schools (Online), 48*(1), 31-41. http://dx.doi.org.ezproxy.bethel.edu/10.1044/2016_LSHSS-16-0041

Bratsch-Hines, M., Vernon-Feagans, L., Pedonti, S., & Varghese, C. (2020). Differential effects of the targeted reading intervention for students with low phonological awareness and/or vocabulary. *Learning Disability Quarterly, 43*(4), 214-226. http://dx.doi.org/10.1177/0731948719858683

Cho, E., Toste, J. R., Lee, M., & Ju, U. (2019). Motivational predictors of struggling readers' reading comprehension: the effects of mindset, achievement goals, and engagement. *Reading and Writing: An Interdisciplinary Journal, 32*(5), 1219-1242. http://dx.doi.org/10.1007/s11145-018-9908-8

Edwards, N. M., & Lambros, K. M. (2018). Video self-modeling as a reading fluency intervention for dual language learners with disabilities. *Contemporary School Psychology, 22*(4), 468-478. http://dx.doi.org.ezproxy.bethel.edu/10.1007/s40688-018-0207-9

Gan, H. H., Lee, J. A. C., & Ghani, K. A. (2019). Oral reading intervention for an English language learner: A Single-case Design. *Theory and Practice in Language Studies, 9*(1), 28. http://dx.doi.org.ezproxy.bethel.edu/10.17507/tpls.0901.04

Gilson, C. M., Beach, K. D., & Cleaver, S. L. (2018). Reading motivation of adolescent struggling readers receiving general education support. *Reading & Writing Quarterly, 34*(6), 505-522. http://dx.doi.org/10.1080/10573569.2018.1490672

Gray, S. H., Ehri, L. C., & Locke, J. L. (2018). Morpho-phonemic analysis boosts word reading for adult struggling readers. *Reading and Writing, 31*(1), 75-98. http://dx.doi.org.ezproxy.bethel.edu/10.1007/s11145-017-9774-9

Hawkins, R. O., Marsicano, R., Schmitt, A. J., McCallum, E., & Musti-Rao, S. (2015). Comparing the efficiency of repeated reading and listening-while-reading to improve rluency and comprehension. *Education & Treatment of Children (West Virginia University Press), 38*(1), 49-70. 10.1353/etc.2015.0005

Jefferson, R. E., Grant, C. E., & Sander, J. B. (2017). Effects of tier I differentiation and reading intervention on reading fluency, comprehension, and high stakes measures. *Reading Psychology, 38*(1), 97-124. http://dx.doi.org/10.1080/02702711.2016.1235648

Khasawneh, M. A. S., & Alkhawaldeh, M. A. (2020). The effectiveness of phonological awareness training in treating deficiencies in auditory processing among children with learning disabilities among elementary cycle students in Saudi Arabia. *International Journal of Language Education, 4*(3), 350-360. https://ezproxy.bethel.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1286146&site=ehost-live&scope=site

Klauda, S. L., & Guthrie, J. T. (2015). Comparing relations of motivation, engagement, and achievement among struggling and advanced adolescent readers. *Reading and Writing: An Interdisciplinary Journal, 28*(2), 239-269. http://dx.doi.org/10.1007/s11145-014-9523-2

Louick, R., Leider, C. M., Daley, S. G., Proctor, C. P., & Gardner, G. L. (2016). Motivation for reading among struggling middle school readers: A mixed methods study. *Learning and Individual Differences, 49*, 260-269. https://doi.org/10.1016/j.lindif.2016.06.027

Lupo, S. M., Tortorelli, L., Invernizzi, M., Ryoo, J. H., & Strong, J. Z. (2019). An exploration of text difficulty and knowledge support on adolescents' comprehension. *Reading Research Quarterly, 54*(4), 457-479. 10.1002/rrq.247

McArthur, G., Castles, A., Kohnen, S., Larsen, L., Jones, K., Anandakumar, T., & Banales, E. (2015). Sight word and phonics training in children with dyslexia. *Journal of Learning Disabilities, 48*(4), 391-407. https://ezproxy.bethel.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1064357&site=ehost-live&scope=site http://dx.doi.org/10.1177/0022219413504996

Mehigan, G. (2020). Effects of fluency oriented instruction on motivation for reading of struggling readers. *Education Sciences, 10*(3), 56. http://dx.doi.org.ezproxy.bethel.edu/10.3390/educsci10030056

Mendez, L. M. R., Pelzmann, C. A., & Frank, M. J. (2016). Engaging struggling early readers to promote reading success: A pilot study of reading by design. *Reading & Writing Quarterly, 32*(3), 273-297. http://dx.doi.org/10.1080/10573569.2014.986592

Miciak, J., Roberts, G., Taylor, W. P., Solis, M., Ahmed, Y., Vaughn, S., & Fletcher, J. M. (2018). The effects of one versus two years of intensive reading intervention implemented with late elementary struggling readers. *Learning Disabilities Research & Practice, 33*(1), 24-36. http://dx.doi.org/10.1111/ldrp.12159

Mulé, C. M., Volpe, R. J., Fefer, S., Leslie, L. K., & Luiselli, J. (2015). Comparative effectiveness of two sight-word reading interventions for a student with autism spectrum disorder. *Journal of Behavioral Education, 24*(3), 304-316. http://dx.doi.org/10.1007/s10864-015-9220-5

Mulé, C. M., Daniels, B., Volpe, R. J., Briesch, A. M., Joseph, L. M., Harris, K., Silwinski, S., & Leslie, L. K. (2018). A comparative effectiveness study of two high-frequency word interventions: Traditional drill and wordsheets. *Journal of Behavioral Education, 27*(2), 240-261. http://dx.doi.org.ezproxy.bethel.edu/10.1007/s10864-017-9287-2

Orkin, M., Pott, M., Wolf, M., May, S., & Brand, E. (2018). Beyond gold stars: Improving the skills and engagement of struggling readers through intrinsic motivation. *Reading & Writing Quarterly, 34*(3), 203-217. http://dx.doi.org/10.1080/10573569.2017.1387834

Oslund, E. L., Clemens, N. H., Simmons, D. C., & Simmons, L. E. (2018). The direct and indirect effects of word reading and vocabulary on adolescents' reading comprehension: Comparing struggling and adequate comprehenders. *Reading and Writing, 31*(2), 355-379. http://dx.doi.org.ezproxy.bethel.edu/10.1007/s11145-017-9788-3

Pergams, O. R. W., Jake-Matthews, C., & Mohanty, L. M. (2018). A combined read-aloud think-aloud strategy improves student learning experiences in college-level biology courses. *Journal of College Science Teaching, 47*(5), 10-15. https://www.nsta.org/store/product_detail.aspx?id=10.2505/4/jcst18_047_05_10

Petscher, Y., Al Otaiba, S., Wanzek, J., Rivas, B., & Jones, F. (2017). *The relation between global and specific mindset with reading outcomes for elementary school students*.Grantee Submission. http://dx.doi.org/10.1080/10888438.2017.1313846

Rasinski, T. V. (2017). Readers who struggle: Why many struggle and a modest proposal for improving their reading. *Reading Teacher, 70*(5), 519-524. http://dx.doi.org/10.1002/trtr.1533

Roux, C., Dion, E., Barrette, A., Dupéré, V., & Fuchs, D. (2015). Efficacy of an intervention to enhance reading comprehension of students with high-functioning autism spectrum disorder. *Remedial and Special Education, 36*(3), 131-142. http://dx.doi.org/10.1177/0741932514533998

Shanahan, T., & North Central Regional Educational Lab., Naperville, IL. (2005). *The national reading panel report. Practical advice for teachers.* Learning Point Associates / North Central Regional Educational Laboratory (NCREL). https://ezproxy.bethel.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED489535&site=ehost-live&scope=site

Swanson, E., Barnes, M., Fall, A., & Roberts, G. (2018). Predictors of reading comprehension among struggling readers who exhibit differing levels of inattention and hyperactivity. *Reading & Writing Quarterly, 34*(2), 132-146. http://dx.doi.org/10.1080/10573569.2017.1359712

Whitten, E., Esteves, K., & Woodrow, A. (2019). In Fehlen, D. J., Behnke, A. (Eds.), *RTI success: Proven tools and strategies for schools and classrooms* (2nd ed.). Free Spirit Publishing Inc.

Wu, S., & Gadke, D. L. (2017). Improving oral reading fluency in elementary school children: Comparing the effectiveness of repeated readings and video self-modeling. *School Psychology Forum, 11*(3), 91-104. http://www.nasponline.org/resources-and-publications/periodicals/spf-volume-11-issue-3-(fall-2017)/improving-oral-reading-fluency-

in-elementary-school-children-comparing-the-effectiveness-of-repeated-readings-and-video-self-modeling