

**Recommendations for Solving the Problem of Low Sixth-Grade Comprehension
Proficiency Scores at Hermitage Middle School in Hermitage, Missouri**

by

Shannon Beers

An Applied Research Report Presented in Partial Fulfillment
of the Requirements for the Degree

Doctor of Education

Liberty University

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Approved by:
Debbie Lynn Wolf, PhD., Faculty Mentor

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Abstract

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text. The rationale for this research was that it is vital to ameliorate the reading comprehension scores of students since improvements may lead to greater grade-level and post-secondary readiness and an increase in school reputation, accreditation, and enrollment. The central research was, How can the problem of sixth-grade below-proficient reading comprehension be solved at Hermitage Middle School in Hermitage, Missouri? Three forms of data were collected for this applied research, including qualitative interviews, quantitative surveys, and documents. The interview data were analyzed by identifying codes and themes. Survey and document data were analyzed using graphical representations of results. Recommendations to solve the problem included providing professional development in Response to Intervention (RTI), creating a school-wide literacy culture, and restructuring RTI.

Keywords: Reading comprehension, background knowledge, vocabulary development, inferencing, Response to Intervention

Role of the Researcher

Shannon Beers has taught in the Missouri public school system for 11 years. For those 11 years, she has worked solely for Hermitage Middle School. Her education includes a bachelor's degree in history from Drury University, a master's degree in American history from Missouri State University, and a master's degree in education from Drury University. She is currently pursuing a Doctorate in Education degree in curriculum and instruction from Liberty University. Shannon began her teaching career as a middle-school English teacher, then transitioned to a secondary instructional coach, and, finally, to curriculum director. As an English teacher, she worked to enhance students' comprehension abilities. Through her instructional coaching background, Shannon offered recommendations to secondary-level teachers and administrators regarding instructional pedagogy, assessment techniques, and data analysis. Currently serving as a curriculum director, Shannon is committed to providing leadership and guidance in planning, developing, implementing, and evaluating course material and instruction to help improve students' reading comprehension scores. Shannon acknowledges that bias may have been present regarding her research since the school employs her. One bias to consider is that she was aware that Response to Intervention (RTI) might not ameliorate students' comprehension abilities. Another possible bias to acknowledge is that Shannon believed that teachers may need instructional guidance on literary-based curricula and practices within their content area to improve reading comprehension.

Permission to Conduct Research

Permission to conduct the research was secured from the Principal, Mrs. Krissy Friedman of Hermitage Middle School. Permission granted access to participants and information regarding the reading comprehension scores of sixth-grade students to make recommendations to solve the problem (see Appendix A).

Ethical Consideration

Doctoral candidates are expected to adhere to various ethical considerations during research. Ethical consideration was exercised to ensure the integrity, respect, and welfare of all participants involved (Check & Schutt, 2012). Research ethical principles, such as participants' privacy, anonymity, and data security, guided the design, data collection, and analysis of this study. Participants were selected via personal communication and included sixth-grade students and teachers at Hermitage Middle School. A parent or guardian was required to sign a permission to participate form before the interview and survey data collection since students were minors. Each teacher was required to sign a permission to participate form before their interview data collection. Pseudonyms were used to ensure anonymity. Interviews were conducted in private to ensure added confidentiality. Participant identities were not collected during the survey procedure. The documents were collected after permission was granted by the school's administration. All materials were stored electronically and password protected. Institutional Review Board approval was not necessary since the information in this research was site-specific and not generalizable and disseminated outside of Hermitage Middle School (Claxton & Michael, 2021).

Chapter One: Introduction

Overview

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text (Northwest Evaluation Association [NWEA], 2022). This chapter presented the Organizational Profile, an Introduction to the Problem, the Significance of the Research, the Purpose Statement, the Central Research Question, and the Definitions for this Research.

Organizational Profile

The educational site selected for this study was Hermitage Middle School, a rural public school located in the small community of Hermitage, Missouri, in the southwestern-central corner of Missouri. Hermitage had a population of 621 with a median age of 57.6, 93% of whom were reported as White (The United States Census Bureau, 2022). Thirty-nine percent of the 304 households in Hermitage were classified at or below the poverty level. The mission statement of Hermitage Middle School was envisioning “a partnership among school, parents, and community, which provides purposeful experiences for students that inspire life-long learning, personal achievement, responsible character, and respect for self and others” (Hermitage R-IV School District, 2022, Comprehensive School Improvement Plan section, para. 1). Hermitage Middle School had 59 total students in grades sixth-eighth (Department of Elementary and Secondary Education [DESE], 2023). Like the community, students were predominantly White (93.5%), followed by Hispanic (3.6%), and unidentified (2.9%); of that, 51% of the students qualified for free and reduced lunch. Nearly half of the middle school student body (49.9%) had

been enrolled in the Hermitage school system since kindergarten. Hermitage Middle School had 12 staff members, of whom 93.3% were certified teachers with an average of 12.8 years of teaching experience, 42% taught 15 or more years, and 51.3% held advanced degrees. School leadership included a principal, instructional coach, and counselor. This study focused on restructuring RTI, a three-tiered instructional strategy to remedy academic gaps, to ameliorate below proficient reading comprehension. RTI is an evidence-based approach for addressing the academic needs of students, which has gained widespread adoption across schools for its effectiveness in identifying and supporting struggling students (Nilvius et al., 2021).

Introduction to the Problem

The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text (NWEA, 2022). Below-proficient reading comprehension is defined as not demonstrating adequate reading skills, utilizing strategies to proficiently analyze and comprehend narrative and informational texts, or determining an understanding of academic and content vocabulary with consistency (DESE, 2021). In the past, school leadership tried to solve this problem by implementing RTI twice a week for 20-45-minute periods during the school day to recover reading comprehension gaps. Students who needed remediation were identified through bi-annual NWEA benchmark data. Students received RTI curriculum and instruction through an online platform in a large-group setting, consisting of 10-15 students, proctored by one middle school math and one middle school English instructor. Most recently, RTI implementation consisted of students being equally divided into three group settings of 8-10 students who received intervention support from four instructors whose subject areas included library science, English, history, and math. Students received RTI Tier 2 reading instruction for 45 minutes twice weekly during the school day. Intervention lesson materials and topics covered

were the same for each intervention group with no regard to ability level or areas of deficit. Periodic observations by school leadership revealed RTI teachers did not follow an instructional framework consisting of an anticipatory set, whole group, guided and individual practice, and closure steps, nor did they use evidence-based instructional strategies such as concept modeling, scaffolding, checking for student understanding, allowing for guided and independent practice, and providing learning feedback with complete fidelity. Past and current RTI implementation proved ineffective since over half of the Hermitage Middle School sixth-grade students scored below-proficient in reading comprehension (NWEA, 2022).

Significance of the Research

Improving sixth-grade below-proficiency reading comprehension may benefit the students, teachers, administration, school board, and community. The benefits of improving reading comprehension included grade-level readiness and future academic success for students (Hudson, 2022). Improved reading comprehension may allow for greater progress for students from one grade to another since sentence structure, the nuance of language, and vocabulary knowledge of grade-level text become more complex. Nearly 50% of the 9.3 million rural students nationwide want to extend their education to post-secondary settings (Roberts & Grant, 2021). Improved reading comprehension may increase the future readiness of students to achieve success at an entry-level position, university or college, or career-training program without the need for an educative aide or remedial coursework. The efficacy of teachers and administrators may benefit as improved reading comprehension may result in higher classroom and statewide yearly assessment test scores (Hudson, 2022). Increased test scores may validate instructional practices and prove student learning, demonstrating the school's success and securing full accreditation as measured by the Missouri School Improvement Program (Mann, 2023).

Improved sixth-grade reading comprehension may increase student registration at Hermitage because Missouri legislators are debating whether to lessen open-enrollment restrictions to force underperforming schools, like Hermitage, to improve (Bernhard & Suntrup, 2023; Mikulecky, 2013; Webber, 2010, 2015). The reputation of the school board and the community may benefit from improved reading comprehension as improvements may prevent diminished enrollment and further expand student registration (Gerber, 2021).

Purpose Statement

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. This applied research study included qualitative and quantitative data collection methods. The first approach was semi-structured interviews with five sixth-grade students and five multi-subject area middle school teachers. The second approach was a Likert-scale quantitative survey. The 10-question survey was administered through Google Classroom, of which 20 sixth-grade students answered. The third approach was a document analysis of sixth-grade Missouri Assessment Program data.

Central Research Question

How can the problem of sixth-grade below-proficient reading comprehension be solved at Hermitage Middle School in Hermitage, Missouri?

Definitions

1. **Background Knowledge-** Prior understanding of particular ideas, circumstances, and issues connected to the words used in the text. Readers who are familiar with the subject will be able to make greater sense of unfamiliar meanings and add to what they already know, resulting in greater comprehension (Hattan & Alexander, 2021).

2. **Balanced-Literacy Model-** A reading comprehension model based on the combination of the bottom-up and top-down reading models that requires readers to use both their knowledge of the language and prior knowledge to understand a text (Fisher et al., 2021; Mondesir & Griffin, 2020).
3. **Bottom-up Model-** A model based on the belief that readers build textual understanding by starting with small units of language, such as individual letters or words, and then combining them to form larger units of meanings, such as phrases and sentences. This process is driven by the prior knowledge held by the reader and their ability to decode written words (Ma, 2021; Mondesir & Griffin, 2020).
4. **Concrete-Operational Stage-** The third developmental stage of Piaget's cognitive growth theory of children who range in ages of 7-11 years old. This stage is characterized by the onset of logical thought where children begin to problem-solve, think multidimensional, understand reversibility, and apply higher-order logic (Manning & Bucher, 2012; Schunk, 2020).
5. **Evidence-Based Reading Strategies-** Peer-reviewed and proven programs, practices, or procedures shown to be effective at improving outcomes when administered as designed. Including, but not limited to, increased reading time, repeated readings, phonic and decoding practice, and computer-assistance reading use (C.N. Thomas et al., 2022; E.R. Thomas et al., 2020).
6. **Flexible Approach-** An RTI framework that consists of students receiving additional remediation during a schedule-specific time during the school day. Applied intervention is need-based (de Haan, 2021).

7. Formal-Operational Phase- The fourth developmental stage of Piaget's cognitive growth theory of children who range in ages of 12 years old and up. This stage is characterized by the onset of abstract thinking, where children begin to form hypotheses, use deductive reasoning, and consider moral and ethical issues (Manning & Bucher, 2012; Schunk, 2020).
8. General Academic Vocabulary - Words with precise meanings used in place of simpler language. Readers encounter general academic vocabulary in all text forms across all subject areas. Knowledge of general academic vocabulary, such as falter, accumulate, and rationalize, aids text understanding due to the precise nuance the word gives to the text's overall meaning (Lawrence et al., 2019, 2021).
9. Inference Making- "The integration of textual information with additional information from readers' prior knowledge that is not available in the text itself but rather individuals' prior knowledge of the topic(s) conveyed in the text" (Gutierrez de Blume et al., 2020, p. 286).
10. Mobilization- A pre-reading activity used to activate students' background knowledge and experiences prior to a reading task and the exposure to a new topic (Hattan & Alexander, 2021).
11. Problem-Solving Model- A solution-based intervention used to identify learning deficits, discover the source, implement a remediation plan, and assess efficacy. Varying methods are necessary to ascertain the learning progress of students and their reactions to interventions. (C.N. Thomas et al., 2022).
12. Pull-Out Approach- An RTI framework that requires students to leave the classroom during a scheduled block of time to receive additional learning intervention to remediate identified areas of need (de Haan, 2021).

13. Reading Self-Efficacy- A reader's self-concept of their reading abilities and their perceived success and motivation to perform reading tasks (Cho et al., 2021).
14. Schema- A compartmentalized structure consisting of one's generalized knowledge of any given subject, situation, or background knowledge. Through schema activation, readers are better equipped to comprehend new information (Schunk, 2020).
15. Standard Protocol Model- An intervention model within the RTI framework in which a broad learning deficit is targeted and one to two interventions are utilized (C.N. Thomas et al., 2022).
16. Tier 1 Intervention- Evidence-based instructional practices utilized by teachers in a whole-group classroom setting. All students receive an on-level, state-aligned curriculum (C.N. Thomas et al., 2022).
17. Tier 2 Intervention- Evidence-based instructional practices utilized by teachers to target learning deficits or missing skills within a smaller population of students or small-group setting (C.N. Thomas et al., 2022).
18. Tier 3 Intervention- Evidence-based, intensified instructional practices performed by reading specialists or special education teachers. One or two learning deficits are targeted, and interventions are provided within a small-group setting (C.N. Thomas et al., 2022).
19. Top-down Model- A reading-comprehension model based on the belief that readers use their prior knowledge and expectations to interpret and make sense of the text (Anderson et al., 1977).

Summary

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage,

Missouri. The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text (NWEA, 2022). This chapter included the Organizational Profile, an Introduction to the Problem, the Significance of the Research, the Purpose Statement, Central Research Question, and Definitions for this research.

Chapter Two: Literature Review

Overview

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text (NWEA, 2022). This chapter provides a Narrative Review, Theoretical Framework, and Summary.

Narrative Review

The narrative review of the literature is the presentation of information found after an analysis of scholarly research. This narrative review discusses the factors affecting reading comprehension, strategies to promote reading comprehension, and reading comprehension improvements through an RTI model.

Factors Affecting Reading Comprehension

Reading comprehension is a multi-faceted cognitive ability of processing and understanding text through employing higher- and lower-order thinking skills involving word decoding, vocabulary knowledge, and text connections (Clemens et al., 2020; Hattan & Alexander, 2021). Comprehension is essential for the reader to engage with and learn from the text. Students who struggle with reading comprehension exhibit one or more issues involving insufficient word decoding, limited vocabulary, and incorrect textual connections due to inadequate background knowledge (Duke et al., 2021). Because of the complexity of reading comprehension, this topic has been an area of debate for teachers. Some teachers lean toward the science of reading (SoR), while others favor the whole-language approach (MacKay et al., 2021; Wyse & Bradbury, 2022).

The SoR is a phonetics-based approach to teaching reading. The SoR claims that reading is a process that involves the ability to recognize and manipulate the sounds of language, the ability to recognize and remember letter patterns, and the ability to extract meaning from text (Duke et al., 2021; Goldfeld et al., 2022; Petrilli, 2020; Wyse & Bradbury, 2022). The SoR involves developing cognitive processes through evidence-based instructional practice, including explicit and systematic instruction in phonics, the relationship between sounds and letters, phonemic awareness, the ability to identify and manipulate individual sounds, fluency, vocabulary, and comprehension-based strategies (Duke et al., 2021). In contrast, the whole-language approach emphasizes a holistic, meaning-based philosophical method to reading instruction. Students learn to read by being exposed to whole words and sentences in context. The whole-language approach downplays the importance of phonics instruction and other decoding skills, emphasizing the importance of background knowledge and how drawing upon prior experiences impacts comprehension.

The primary argument between the SoR and the whole-language approach focuses on the most effective way to teach students to read. Teachers who favor the SoR argue that a strong foundation in phonics, vocabulary, and decoding skills are essential for students to become proficient readers. Teachers who advocate for the whole-language approach argue that reading is a complex process that cannot be reduced to a set of skills. Teachers favoring the whole-language approach argue that comprehension is achieved through connecting words with visual representations, creating schemata pathways (Goldfeld et al., 2022; Petrilli, 2020; Wyse & Bradbury, 2022). In recent years, there has been a growing consensus that a balanced approach to reading instruction, which combines the best elements of both, is the most effective way to teach students to read (Bowers, 2020; Fisher et al., 2021). Determining how the different approaches

contribute to middle-school students' comprehension abilities may be vital in solving below-proficient reading comprehension.

The ability to comprehend text effectively is essential for academic success. But many middle-school students are at risk due to reading comprehension inabilities. Sixth-grade students are particularly vulnerable to the increased academic rigor of middle school since this period in their lives marks the developmental bridge where they either rise to the challenge of increased rigor or lose learning motivation and risk falling academically behind their peers (Cho et al., 2021). Because of the new challenges middle school presents, many students may experience lapses in self-confidence.

Self-Efficacy

Self-efficacy is the belief in one's ability to perform a particular task or accomplish a specific goal (Peura et al., 2019). Self-efficacy impacts all facets of academia, including reading comprehension. Students who do not believe they can understand complex texts may avoid reading and be less engaged (Cho et al., 2021; Chou, 2019; Kula & Budak, 2020). Struggling readers with low self-efficacy feel overwhelmed by reading and lack the motivation to persist in their efforts, believing their difficulties are a fixed characteristic out of their control to change. In contrast, struggling readers with higher self-efficacy are more apt to approach reading more confidently and persistently, increasing motivation to keep trying despite difficulties. Students with a greater sense of self-efficacy and who believe they can understand a complex text may be more willing to ask questions or seek additional resources to improve their understanding (Cho et al., 2021). At the same time, reading self-efficacy predicts initial reading comprehension skills but not potential improvements. Self-efficacy is much more closely related to coexisting

achievement than to future growth. Learning how sixth-grade students' self-efficacies affect comprehension can help to inform instructional practices tailored to their strengths. Teaching to the strengths of students may help improve their self-efficacy, resulting in stronger beliefs about their abilities to understand and comprehend (Cho et al., 2021; Lee et al., 2022).

Background Knowledge and Comprehension

The lack of background knowledge presents literacy barriers for readers (Filderman et al., 2022; Hattan & Alexander, 2021). Familiarity with the subject enables readers to comprehend more accurately, providing a path to connect prior learning to new information. Comprehension improves when students have adequate background knowledge about a topic of interest. Struggling readers exhibit better text comprehension about a familiar topic than a more proficient reader whose background knowledge is limited (Smith et al., 2021). Middle school teachers often assume their students possess adequate background knowledge and overlook the variances of student learning characteristics, such as reading ability, outside circumstances, and levels of learning motivation, which negatively impact learning outcomes (de Haan, 2021). The more students know about a topic, the better they will be able to understand texts with new information.

Vocabulary and Comprehension

An extensive vocabulary is necessary for reading comprehension (Lawrence et al., 2019, 2021; O'Reilly et al., 2019). Not only does reading comprehension involve understanding individual words, but also understanding how they each fit together to convey meaning. Readers understand the meaning of words and concepts within a text more easily when they possess a broader vocabulary. Students with a more extensive vocabulary tend to have better comprehension skills, meaning that an extensive vocabulary allows readers to make connections

between words and concepts, which aids in comprehension (Lawrence et al., 2019, 2021; O'Reilly et al., 2019; Wood et al., 2021), A greater depth and breadth of word knowledge is necessary to comprehend text more accurately. Students must understand at least 95% of a text's words to comprehend it fully (Lawrence et al., 2019, 2021; O'Reilly et al., 2019). Since many struggling readers may be unfamiliar with a portion of the words used in grade-level texts, they may require additional vocabulary support (Lawrence et al., 2019, 2021).

Reading comprehension is different from word comprehension. Reading comprehension is understanding and interpreting textual meaning between words and ideas presented in writing. Word comprehension, in contrast, refers to the ability to understand the meaning of individual words. Lawrence et al. (2019, 2021) note that the ability to use a broad range of vocabulary sets apart those with higher reading comprehension skills from those with lower skills. Word comprehension is not the only essential factor in reading comprehension. A reader can have strong word comprehension skills but still require support with overall reading comprehension if they cannot understand the relationships between words and ideas presented in the text.

Vocabulary directly influences reading and other essential skills, such as fluency, context, and word identification, making this a strong predictor of comprehension (Wood et al., 2021). Vocabulary attainment of middle-school students builds with greater text exposure. Since word knowledge is not an innate developmental ability, middle school teachers at Hermitage should actively include hands-on, real-life context-engaging opportunities to learn general and academic-based vocabulary. The ability to read words accurately with automaticity decreases students' comprehension variances as they age (de Haan, 2021). As a result, word knowledge may be an initial barrier to understanding what is read. But once a threshold of adequate word fluency, decoding, and recognition is reached, these skills play less of a role in reading

comprehension abilities in middle school-aged students. This finding is particularly important when determining the abilities of struggling readers in NWEA because this benchmark assessment includes vocabulary as a determinant of comprehension.

Inference-Making and Comprehension

Inference-making is the ability to deduce information not explicitly stated in the text. This cognitive skill involves drawing conclusions or judgments based on implicit and explicit information within a text (Gutierrez de Blume et al., 2020). Inference-making is integral to reading comprehension, enabling readers to understand the text and gain a deeper understanding. Active engagement with the text is necessary when making inferences, requiring readers to draw conclusions and make connections using predictions, background knowledge, and retrospect (Barth & Thomas, 2022; Elleman et al., 2019). Inference-making represents a variable that can distinguish comprehension abilities. If middle-school students find this skill difficult, additional Tier 1 inference-making interventions may need to be provided by classroom teachers (Martinez-Lincoln et al., 2021).

Executive Functioning

During reading tasks, executive functioning skills such as attention, anxiety, and personal mindset affect inference-making abilities. The inability to regulate cognitive processes, like off-task behaviors, can negatively impact inference-based reading comprehension (Martinez-Lincoln et al., 2021). Inference-making requires readers to monitor thinking, switching from one skill to another based on their immediate needs. Struggling readers often find this process difficult. Attention to a task is essential to cognition and directly correlates to learning. Students who experience a lapse in attention while reading experience greater rates of lost comprehension

when unable to regulate their thoughts (Martinez-Lincoln et al., 2021; McNamara, 2020; Meixner et al., 2019).

Middle School and the Middle Schooler

Typically, middle school encompasses grades sixth-eighth, and the average middle schooler exhibits varied academic needs that present learning barriers uniquely distinct to this group of students (C.N. Thomas et al., 2022; Dawes et al., 2021; Manning & Bucher, 2012). Middle-school students experience changes in cognitive, psychosocial, and physical development (Manning & Bucher, 2012; Schunk, 2020). Cognitive changes most prevalent in middle-school students include the ability for thought-out moral and ethical decision-making and real-life problem-solving. The psychosocial developmental characteristic of most middle schoolers includes a shift in identity (Galloway et al., 2020). Students look to their peer groups rather than parents or teachers during middle school for guidance and assurance (Dawes et al., 2021; Manning & Bucher, 2012; X. Zhang et al., 2019). Physical developmental characteristics include changes in height, body size, and hormones (Manning & Bucher, 2012). Due to these developmental characteristics, learning gaps are complex and visible. Middle schoolers straddle two distinct cognitive developmental stages. As Piaget's cognitive theory outlines, middle school students transition from the concrete-operational stage to the formal-operational phase (Manning & Bucher, 2012; Schunk, 2020). Middle schoolers move from applying logic to concrete ideas to using logic to abstract concepts during this transition. Examples of abstract-logical thinking commonly displayed by middle schoolers include deductive reasoning in hypothetical situations. Students in the concrete developmental stage limit their understanding by generalizing and not extending their thinking to encapsulate broader topics. In contrast, middle schoolers in the formal operations stage possess higher-order thinking abilities, such as critical analysis and

interpretation, perspective assumption and a broader sense of globalization, and written and verbal expression to articulate a point of view or an opinion (Manning & Bucher, 2012).

Poor comprehension posits challenges for struggling readers in middle school (C.N. Thomas et al., 2022; Manning & Bucher, 2012). Reading rigor during middle school increases. Middle-school students routinely encounter complex texts throughout a typical school day. This circumstance presents a challenge because many struggling readers lack the necessary background knowledge and vocabulary to read grade-level texts (Filderman et al., 2022). When students advance into middle school from elementary with inadequate background knowledge and limited vocabulary, they often experience difficulty with inference-making, limiting their text comprehension (Cho et al., 2021; Gutierrez de Blume et al., 2020; Hattan & Alexander, 2021).

Since 2017, the reading comprehension abilities of fourth-, eighth-, and 12th-graders have declined (National Assessment of Educational Progress [NAEP], 2023). These findings are meaningful because this data is an indicator of academic preparedness. Poor reading comprehension can lead to difficulties in understanding and interpreting text information, limiting the ability of effective communication, making informed decisions, and participating fully in school (Cho et al., 2021; Hudson, 2022; Jones, 2019). Comprehension can also affect self-esteem, motivation, and overall academic achievement (Cho et al., 2021). Students who struggle with reading comprehension may experience frustration and embarrassment and avoid reading, perceiving it as a chore rather than a reward (Glasswell et al., 2022), further hindering their development and long-term academic success.

Differences in reading comprehension abilities exist between genders (Manu et al., 2023; Miyamoto, 2023). Girls outperform boys in reading comprehension assessments, and the gender

gap widens as students age. One factor explaining the gap in comprehension abilities is that male students are less motivated to read than girls (Espinoza & Strasser, 2020; Manu et al., 2023). Students who are more motivated to read experience greater reading comprehension (Barber & Klauda, 2020). However, reading is viewed as a female activity, decreasing the reading motivation of males (Espinoza & Strasser, 2020). Text-based interest, topic, and genre are additional factors affecting reading motivation (Lepper et al., 2022; Pesout & Nietfeld, 2020). Boys are more motivated to read if the material relates to the suspense or action genres compared to girls, who prefer relationship-based text (Lepper et al., 2022).

Also detrimental to comprehension is the added pressure of a new learning environment and increased academic expectations. The uncertainty of new academic expectations associated with an unfamiliar learning environment often results in depression and low self-esteem (Daniels, 2019).

Moreover, bone and muscle growth and the onset of puberty can cause middle-school students to feel restless and tired, contributing to their below-proficient reading comprehension (Manning & Bucher, 2012). Middle schoolers experience a growth spurt. On average, depending on gender, students grow 7-10 in. (179-254 mm) in height during sixth-eighth grades. Knowing the developmental characteristics of middle schoolers may help teachers plan more effective instruction as it may provide greater insight into creating age-appropriate lesson plans, learning expectations, and managing classroom behaviors, all of which may improve reading comprehension abilities (Dawes et al., 2021; Filderman et al., 2022; Schunk, 2020).

The Roles of Background Knowledge, Vocabulary Attainment, and Inference Making

Comprehension is not a single skill but rather a process that requires foundational reading abilities such as phonemic and phonetic awareness, fluency, and decoding (Castles et al., 2018).

For some middle-school students, their comprehension issues frequently extend beyond the foundational scope of reading. Their issues with reading comprehension stem from limited background knowledge, vocabulary, and inferencing abilities (Castles et al., 2018; Lawrence et al., 2019, 2021; O'Reilly et al., 2019). Background knowledge, vocabulary, and inference-making are interlocked and share reciprocal relationships wherein each influences the other. Due to these relationships, readers make more accurate text-based inferences when they possess broader background knowledge and vocabulary (Lawrence et al., 2019, 2021; O'Reilly et al., 2019). Middle-school students require routine exposure to content-specific texts to build background knowledge, gain a richer vocabulary, and make accurate inferences (Castle et al., 2018). Additionally, inference-making deficits may not be related to an inability to infer but are related, at least in part, to deficits in background knowledge and vocabulary (Elleman & Oslund, 2019; O'Reilly et al., 2019). Since a certain level of inference is required to understand most texts, readers must possess topical background knowledge and vocabulary of the text's subject matter (O'Reilly et al., 2019).

Consequently, a lack of prior knowledge or vocabulary deficits sometimes do not fully explain inferencing difficulties. The ability to form inferences is impaired in struggling comprehenders, even when knowledge of the text is sufficient (Elleman & Oslund, 2019; O'Reilly et al., 2019). Word recognition is still the most substantial direct predictor for comprehension, but inference-making directly influences the comprehension of both struggling and proficient readers (Elleman & Oslund, 2019). To solve the problem of below-proficient reading comprehension, a balanced approach to reading that includes the activation of background knowledge, the growth of general-academic vocabulary, and skillful inference-making that address the varied abilities unique to Hermitage may need consideration.

Strategies to Promote Reading Comprehension

Evidence-based reading strategies (EBRS) positively impact the comprehension of struggling readers. EBRS that encourage students to make text-based connections, ask questions, create visuals, and promote peer-to-peer communication and collaboration are more likely to lead to comprehension growth (Castells et al., 2021; Filderman et al., 2022; Schunk, 2020). Teachers who implement, model, and use these reading strategies experience greater comprehension outcomes in their students. Using EBRS may be an effective method to ensure that all sixth-grade students at Hermitage make comprehension gains and develop their reading skills. Numerous EBRS exist, and their use involves all subject-area domains and teachers. Addressing the comprehension needs of middle-school students is a schoolwide effort (Cho et al., 2021). EBRS commonly used to aid comprehension include predicting, questioning, inferring, and retelling. Implementing reading strategies across all content areas that include opportunities to activate background knowledge, build vocabulary attainment, and write text-based summaries improve the comprehension abilities of all students (Hattan & Alexander, 2021). Content-specific middle-school teachers should use evidence-based strategies, including a clear reading purpose, discussion, and graphic organizers for textual mapping to activate prior knowledge so readers can connect new learning with previous learning (de Haan, 2021; Filderman et al., 2022).

Vocabulary-Based Strategies that Support Background Knowledge Activation

Learning vocabulary is a continual process. Students are routinely exposed to unfamiliar words in multiple contexts, but for struggling readers, vocabulary acquisition is often difficult (Dazzeo & Rao, 2020). Due to this, teachers of all curriculum areas must provide clear instructions and use effective, evidence-based strategies to engage students in acquiring and

retaining new words to improve literacy (Elleman & Oslund, 2019). There is a direct connection between vocabulary and reading comprehension, yet teachers often struggle with incorporating effective evidence-based vocabulary instruction into their daily teaching practice. Learning vocabulary words does not necessarily improve simply from looking up definitions, applying contextual cues, recalling word meanings, or using vocabulary terms in sentences (Dazzeo & Rao, 2020; Elleman & Oslund, 2019). Effective vocabulary acquisition involves students actively connecting the newly learned word to their prior knowledge and experiences with strategies that include pre-reading activities or mobilization techniques (Dazzeo & Rao, 2020; Elleman & Oslund, 2019; Hattan & Alexander, 2021). Activating background knowledge is crucial for reading comprehension. Students must be able to draw on their past to develop understanding when confronted with new ideas and unfamiliar issues. Since students' prior knowledge is essential in comprehension, teachers must begin reading by prompting students to activate their background knowledge. To do so, teachers must ask students what they already know and provide the foundational knowledge necessary to understand new information. One evidence-based strategy to activate and promote the growth of background knowledge is a three-column graphic organizer titled KWL (Dazzeo & Rao, 2020). A KWL visual organizer requires students to list what they know, what they want to know, and what they learned. The use of a KWL organizer increases learning engagement while promoting the organization of stored information prior to, during, and following a period of instruction of a new learning topic, which leads to greater reading comprehension and longer retention of read material (Dazzeo & Rao, 2020; Hattan & Alexander, 2021).

Another evidence-based strategy to help activate background knowledge in students is the novel approach, relational reasoning, first introduced by researchers Hattan and Alexander

(2021). The relational reasoning strategy promotes reading comprehension by strengthening text-based connections and identifying similarities and differences between the reader and the text. Like the KWL strategy, relational reasoning requires students to make text-based connections within a visual organizer. Relational reasoning differs in that the underpinnings of this strategy focus more on students making meaningful contextual connections by finding similarities, anomalies, differences, and fallacies between themselves and the text.

Inference-Making Strategies

Middle school is challenging for students who struggle with comprehension because they must engage with textual material to broaden their knowledge. Two factors prevent many struggling readers from comprehending text (Barth & Thomas, 2021; McNamara, 2020). The first factor is inferencing. Making inferences is the process of connecting textual context with prior knowledge of a subject. Readers must look beyond the material and draw conclusions from their personal experiences and general knowledge of the subject to form conclusions about a text. Readers support claims, make plausible predictions, and draw appropriate interpretations from the text through inference-making. But, the frequency of correct inferences significantly decreases when struggling readers are required to draw conclusions from larger chunks of text (Barth & Thomas, 2021; Hussein et al., 2019). One solution many teachers apply is to break the reading material into smaller, more manageable sections. Yet, struggling readers, despite the text length, still struggle with drawing accurate inferences from brief text passages even when they have the prior knowledge necessary to draw the proper conclusions (Barth & Thomas, 2021).

The second factor that prevents readers from comprehending text is the lack of inference-based practice (Barth & Thomas, 2021; Soto et al., 2019). Many middle-school teachers do not provide struggling readers opportunities to interact with texts, learn the main ideas, identify

essential meanings, and practice the reasoning necessary to integrate information from various sources (Barth & Thomas, 2021; Northrop & Kelly, 2019; Soto et al., 2019). As a result, the reading comprehension of many struggling readers persists beyond their years spent in middle school. Inferencing skills can be strengthened through explicit and structured instruction and scaffolded teaching (Barth & Thomas, 2021; Elleman & Oslund, 2019). Explicit and structural instruction are strategies to increase inference accuracy, consistency, and automation through students' text-to-text and text-to-knowledge connections as they read. An essential factor of these strategies includes an emphasis on practice and feedback through the discussion of textual content in a whole class or small-group setting (Barth & Thomas, 2021; Murphy et al., 2022). Text-related discussions are critical in improving reading comprehension and inference-making abilities, particularly for struggling readers because hearing differing perspectives adds to their knowledge. Barth and Thomas's (2021) study is crucial because it highlights a potential drawback of chunking texts for struggling readers. Combining smaller sections with text-based discussions may benefit struggling readers and help solve below-proficient comprehension.

Constructivism-Based Reading Strategies

Constructivism-based reading strategies include the spectrum of the universally accepted ones to the more modern adaptations. These strategies require students to actively construct their knowledge and meaning from the information they receive rather than processing information passively (Ediger, 2018; Lim et al., 2022). Constructivism-based reading strategies encourage students to engage with the text and make connections between what they already know and the new information they are reading. By doing so, students build on their prior knowledge and develop a deeper understanding of the material. As a result, students can better retain and transfer information to other contexts. Yet, when struggling readers are grouped in the same

class, they are often underexposed to constructivism-based reading strategies because teachers rely more on worksheets than hands-on projects (Northrop & Kelly, 2019).

Traditionally, constructivists have used a myriad of strategies to promote higher-order thinking. Strategies range from discussions to product creation, such as text summation-based poetry or role-playing a scene from parts of a story (Ediger, 2018). A commonly held belief among many constructivists is that whole-class and student-centered discussions produce greater text comprehension and academic language usage (de Haan, 2021; Ediger, 2018).

One traditional constructivist-based comprehension strategy that fosters greater textual understanding is literature circles (Ediger, 2018). Literature circles are small groupings of four or five students where each student reads a common text, assumes different group roles and responsibilities, and then conducts a book discussion where the teacher serves only as the outside moderator. Literature circles encourage active engagement, collaborative learning, critical thinking, and reading motivation. These potential outcomes are critical for struggling readers because by discussing a commonly read text with peers, they gain a deeper understanding, retain the material, hear different perspectives, build on shared ideas, and create personal connections (Venegas, 2019). In addition to improvements in reading comprehension and more in-depth text understanding, literature-circle discussions lead to improvements in "critical and creative thinking and problem-solving skills" (Ediger, 2018, p.89).

Another popular constructivist-based reading comprehension strategy is question-answer relationship (Afriani et al., 2020; Ediger, 2018). Question-answer relationship is an effective strategy in that it helps students, especially those who struggle most with reading, deepen their thinking through Bloom's Taxonomy of higher-order thinking graphic organizer, where students construct their own text-related interpretation, summation, application, and analysis questions.

With the influx of technology applications available in K-12 classrooms, a more modern constructivism-based reading strategy includes gamified learning (Dindar et al., 2020). Gamified learning is the application of game-like elements to non-game tasks to encourage greater student learning engagement. In a study by Dindar et al. (2020), vocabulary knowledge improves by including web-based gamification to investigate the learning-achievement outcomes of competition and cooperation among students. As a result, vocabulary can improve through gameplay competitiveness and cooperation of students, indicating that this pedagogical strategy may benefit sixth-grade students.

Disciplinary and Content Area Literacy Strategies

Disciplinary and content area literacy strategies are essential to reading comprehension. These strategies are often thought to be synonymous; in reality, they are distinctly different. Disciplinary literacy strategies engage all levels of readers, resulting in students going beyond the textual surface, thus formulating deeper thinking and abstract ideas (Brock et al., 2021; Shanahan & Shanahan, 2014). Disciplinary literacy strategies focus on building reading skills through the dissimilarities of each subject area. These strategies are tailored to the unique characteristics of each subject area and designed to help students build content knowledge and develop critical thinking skills related to that specific area. Disciplinary literacy strategies encourage students to think like historians, scientists, and mathematicians through tools distinct to that subject area (Brock et al., 2021; Haas et al., 2022; Shanahan & Shanahan, 2014). As a result, students build content comprehension by interpreting varying historical perspectives, building self-created scientific rationales and arguments, and deconstructing math word problems.

In contrast, content area literacy strategies are more generalized and less favored by subject-area teachers (Beaudine, 2022; Shanahan & Shanahan, 2014). Rather than building comprehension with tools of inquiry such as interpretation, hypothesizing, and critical thinking, content area strategies enable students to build comprehension through reading-focused strategies. Content area strategies include predicting and summarizing text, identifying main ideas and supporting details, and using context clues to infer word meanings.

Reading comprehension is a crucial aspect of every subject area. However, in classrooms other than English, little instructional time is spent on improving comprehension (Gutierrez de Blume et al., 2020). As a means of improvement, some schools implement aggressive curricula and strategy use across subject areas to remediate poor comprehension abilities in students. But, many factors affect literacy-based strategy use among non-reading teachers. The most significant factor stems from subject-area teachers lacking knowledge, time, and practical application of effective strategies (Ciampa & Gallagher, 2021; Stevens et al., 2022). Teachers may also lack the time to investigate the best strategy due to the extra time spent developing content-driven lessons to address the increasing curriculum standards. The lack of expertise with literacy-based strategies best suited to specific content areas also eliminates their use. Because of this, there is a vital need for additional research into implementing literacy practices in classrooms other than English (Fang & Chapman, 2020). Additionally, teachers often feel unprepared to use literacy-based strategies to help students comprehend (Fang & Chapman, 2020; Raymond-West & Rangel, 2020).

Teacher-preparatory programs differ from school to school, and the variances between the programs affect teacher effectiveness (Elleman & Oslund, 2019). Teachers who received their certification through alternative means feel less prepared than those who went through

traditional programs (Raymond-West & Rangel, 2020). Preservice and first-year teachers, regardless of certification route, report experiencing a gap in their preparatory programs and that their programs emphasized learning content knowledge instead of focusing on how to teach students to read. Because the teachers at Hermitage Middle School have varying preparatory backgrounds, it may be necessary to provide literacy-based professional development to address potential reading comprehension gaps.

Teacher Instructional Practice

An increase in the rigor of Missouri Learning Standards, as outlined by the comprehensive literacy state development program, places greater value on reading comprehension in subjects other than just English (DESE, 2023). Due to this, students must demonstrate their content knowledge through their reading and writing skills in all subject areas (Beaudine, 2022; DESE, 2023; Wexler, Swanson, Kurz, et al., 2019). Incorporating literacy practices in math, science, and history classes better enables students to build subject knowledge. But, Wexler, Swanson, Kurz, et al. (2019) report that content-area teachers encounter barriers to effective literacy-strategy implementation. Barriers such as the number of middle-school students per class, the significant variances of abilities, the need to cover the curriculum in a timely manner, and poor student-learning motivation restrict teachers from focusing on reading comprehension strategies. Yet, active utilization of comprehensive strategies by all subject-area teachers is vital to strengthening reading comprehension abilities in students. It may be necessary for the middle-school teachers to learn about the use of literacy-based strategies to solve the problem of below-proficient reading comprehension of sixth graders.

Reading Comprehension Improvements Through an RTI Model

Text comprehension is crucial for students because reading and the ability to understand

textual meaning show a direct correlation to academic and career success. The National Assessment of Educational Progress (2023) data show significant declines in reading skills among eighth-grade students, with lower average scores for most student groups, including that of low socioeconomic status. Socioeconomic status also significantly impacts academic performance. Students from low-socioeconomic groups are less academically successful in high-stakes English, math, and science assessments (Lakhan et al., 2021). This information is crucial because over half of the Hermitage Middle School students are from low-socioeconomic backgrounds, possibly impacting their comprehension abilities negatively. Students who struggle with text comprehension risk not making adequate academic progress, potentially hindering their ability to graduate high school and foreseeably leaving school without the ability to comprehend the written word (C.N. Thomas et al., 2022; de Haan, 2021). Yet, comprehension intervention efficacy at the secondary level remains an under-researched area despite the prevalence of comprehension issues in students.

Proactive measures to address poor reading abilities are widely used at the elementary level, but the need for reading comprehension intervention continues at the middle-school level. In middle school, reading comprehension becomes critical to academic achievement, as does college and career readiness; however, less than 40% of U.S. students are proficient in reading by the end of eighth grade (Martinez-Lincoln et al., 2021). Since more than half of middle schoolers struggle with comprehension, students require interventions. But, not all struggling readers benefit from Tier 1 reading-comprehension interventions. In recent years, schools routinely remediate learning deficits through an RTI model, resulting in varying efficacy. Understanding the structural elements and implementation requirements may be necessary to increase RTI effectiveness as a means to ameliorate sixth-grade reading comprehension.

RTI

RTI is a three-tiered proactive, data-driven framework to address learning difficulties within student populations (Alahmari, 2019; C.N. Thomas et al., 2022; Kramer et al., 2021; Nilvius et al., 2021). The RTI process involves academic screening, progress monitoring, and evidence-based instructional practices (Kramer et al., 2021). The basic premise of RTI is prevention. RTI often addresses reading comprehension and mathematical deficits to avert the academic failure of students and the misidentification of special education services (Alahmari, 2019). Struggling students, through early identification, are provided support before an academic decline occurs. A systematic recurring assessment and data monitoring that determines students' responses to tiered interventions are the basic tenets behind RTI efficacy (Alahmari, 2019; Kramer et al., 2021). Instruction is purposeful and varied, directly relating to the specific areas and depths of students' areas of academic concern, particularly those at most risk of falling academically behind. A successful RTI model may require several years of implementation in schools with high percentages of struggling students and may be less effective at remediating reading deficits in middle school-aged students (L. Zhang et al., 2019). Even so, RTI can effectively address learning difficulties among those most likely to fall behind academically.

Tier 1 Intervention. Tier 1 intervention includes a differentiated subject-area curriculum with whole-class instruction covering content knowledge, vocabulary, and strategy-based reading. Teachers use evidence-based instructional practices within the Tier 1 framework to teach state-aligned curricula. Between 75%-80% of students who receive Tier 1 instruction achieve proficiency (C.N. Thomas et al., 2022; L. Zhang et al., 2019). The classroom teacher implements Tier-1 interventions as needed and closely monitors student academic progress. For some students, Tier 1 instruction is inadequate to remediate learning deficits. Students who need

additional intervention support receive further instruction in Tier 2 or Tier 3 (Alahmari, 2019; C.N. Thomas et al., 2022; de Haan, 2021; E.R. Thomas et al., 2020).

Tier 2 Intervention. Tier 2 intervention is a data-driven structure where students are provided evidence-based instruction outside of the regular classroom in a small-group setting. According to de Haan (2021), Tier 2 is generally reserved for students below expected learning benchmarks and at risk of academically falling behind their peers. Benchmark scores and state-mandated assessments identify students in most need of Tier 2 interventions. Instructional interventions focus on the specific learning needs of students and are more intensive and deliberate due to the severity of learning gaps (Alahmari, 2019; C.N. Thomas et al., 2022; de Haan, 2021; E.R. Thomas et al., 2020; Kramer et al., 2021). Ideally, Tier 2 intervention groupings, consisting of no more than 10-15 students, rotate on a 3-week cycle (C.N. Thomas et al., 2022; Sonju et al., 2019).

Tier 3 Intervention. Tier 3 intervention is individualized-targeted instruction by a reading specialist or special education teacher (C.N. Thomas et al., 2022; de Haan, 2021). Tier 3 grouping inclusion is for the 5% of students who make minimal progress in Tier 2 or are identified, through testing, to have severe reading deficits and receive additional educational support through an individualized educational plan (Alahmari, 2019). Students in Tier 3 are identified as those most likely to fail academically or those who fail to respond to Tier 2 interventions. Students who receive Tier 3 interventions may be candidates for designation as having special educational needs (C.N. Thomas et al., 2022; de Haan, 2021). Tier 3 is categorized as special education and is the smallest of the three tiers, consisting of 3 to 5 students in one-on-one instruction with a special education teacher or a learning specialist (Alahmari, 2019; Nilvius et al., 2021).

The RTI framework is composed of varied implementations and approaches. The two most common RTI implementations at the secondary level include (1) the problem-solving model, which is a data-driven, needs-based individualized intervention, and (2) the standard-protocol model where interventions are standardized, and all students receive the same Tier 2 interventions (Alahmari, 2019; C.N. Thomas et al., 2022). The two most common RTI approaches include (1) the pull-out approach, where students are pulled out from noncore-area classes to receive intervention support, and (2) a flexible approach, where students receive academic intervention at a designated time during the school day. (C.N. Thomas et al., 2022).

Problem-Solving Model. Problem-solving model (PSM) is a diagnostic-driven, solution-based intervention (Alahmari, 2019; C.N. Thomas et al., 2022; Grapin et al., 2019). Teachers pinpoint the learning deficit and establish its cause, create a plan to ameliorate the deficit, implement an individualized intervention, then determine the effectiveness of the intervention in a PSM. Progress monitoring and response to individualized intervention are collected across several formats within a PSM framework. Commonly used data collection methods include, but are not limited to, teacher observations, assessment forms, classroom grades, and student work examples. A PSM requires considerable expertise for implementation and practice (Pullen et al., 2018). A negative aspect associated with a PSM is that teachers must possess significant evaluative and intervention experience. They must be knowledgeable about a range of assessment and intervention approaches, have the professional judgment and experience to know which assessments and interventions to apply, and have the ability, skill, and knowledge to measure the effectiveness of interventions (Alahmari, 2019; C.N. Thomas et al., 2022; Pullen et al., 2018). Middle-school students respond more favorably in a Tier 2 PSM when interventions

are individualized, resulting in a positive impact on academics, such as reading comprehension (C.N. Thomas et al., 2022; de Haan, 2021).

Standard-Protocol Model. A Standard Protocol Model (SPM) provides selected universal interventions to ameliorate students' most prevalent learning deficits (Alahmari, 2019; C.N. Thomas et al., 2022). The intervention is delivered in a small group setting by a teacher trained in a particular program or strategy spanning an intervention period of 3-4 months (Nilvius & Svensson, 2021). Schools begin establishing an SPM by reviewing student data to identify the most paramount area of concern. The selection of one or two research-based interventions is made once areas of learning improvements are identified (Alahmari, 2019; C.N. Thomas et al., 2022). Universal screening tools identify students in need of targeted interventions. Those needing intervention support receive nearly daily RTI instruction of at least 30 minutes per day from specific teachers assigned to each RTI Tier 2 intervention class period. Typically, general-education teachers teach Tier 1, reading specialists teach Tier 2 and Tier 3, and special-education teachers primarily teach Tier 3 (C.N. Thomas et al., 2022; de Haan, 2021).

There are several advantages associated with an SPM. One advantage is the greater use and long-term fidelity by teachers after intervention training is provided. The speed of intervention implementation is another recognized asset of an SPM. Immediate intervention access is available once students and learning deficits are identified (C.N. Thomas et al., 2022; Nilvius & Svensson, 2021). Depending upon learning progress, students either return to Tier 1 instruction or move to more intensive instruction through Tier 3 interventions. An SPM is less expensive for schools to implement due to fewer hours necessary for intervention training since strategy use is limited to one or two.

There are negative aspects associated with an SPM. For instance, fewer gains in learning are potentially made because this framework focuses on one or two interventions (Sonju et al., 2019). No universal strategy can address all student learning deficits. Some students may respond positively to one intervention, while others may need a different intervention. Strategy selection is critical, requiring significant consideration when choosing the interventions (Alahmari, 2019; Sonju et al., 2019). Poorly chosen interventions may not address all student learning deficits and may result in fewer academic gains. An SPM implementation often requires restructuring the school's schedule to provide time for intervention groups.

Pull-out Approach. The most common intervention model found in secondary school settings is a pull-out approach, where students leave the classroom for short periods to receive individual or small group data-driven instruction from a learning specialist or special education teacher (de Haan, 2021). Intervention scheduling is the primary advantage of adopting this type of approach. A pull-out approach allows students to receive Tier 2 intervention regularly. School districts often lack daily access to specialized staff positions, such as a reading specialist or language pathologist, to assist with instructional interventions. A pull-out approach accommodates specialized staffing availability while providing intervention instruction.

Significant drawbacks to this approach exist. The scheduling requirements of a pull-out approach cause students to miss essential classroom content while out of the room, potentially leading to further academic decline (Sonju et al., 2019). Students who receive interventions in a pull-out approach risk a decrease in self-efficacy or self-concept because they are old enough to understand the social complexities of being visibly separated from their peers (Cho et al., 2021; de Haan, 2021; Manning & Bucher, 2012).

Flexible Approach. A flexible approach is a model that consists of all students receiving RTI interventions at a common scheduled time during the school day (de Haan, 2021). As with a pull-out approach, a flexible approach is also data-driven, with targeted interventions for student ability-based groupings, but there are two advantages of a flexible approach over the pull-out approach. One advantage is that it eliminates the potential increase of negative social-emotional feelings a pull-out approach may create for students (Cho et al., 2021; de Haan, 2021). Another advantage is that it allows more students to receive interventions. This approach is often unfavorable due to scheduling constraints within the school day (de Haan, 2021; Venghaus et al., 2023). Drawbacks to a flexible approach include shifting the responsibility of interventions onto classroom teachers without regard that some may not possess knowledge of appropriate evidence-based interventions. As a result, potentially costly and time-consuming professional development in intervention application is often necessary.

Obstacles to RTI Implementation within a Secondary School Setting

RTI research continually shows that using learning interventions in middle school can be successful, but implementing RTI at the middle school level remains problematic. There are several factors that negatively affect RTI implementation in middle school. First, secondary educational settings are uniquely different from their elementary counterparts, and many factors plague successful implementation (Savitz et al., 2022). The key to providing quality tiered instruction lies in implementing a realistic schedule that makes the best use of school personnel while fostering a collaborative school culture among all teaching staff members (C.N. Thomas et al., 2022; E.R. Thomas et al., 2020; Savitz et al., 2022). Middle school students attend six to seven different classes throughout a typical school day. Due to this, time slotting RTI in an already content-heavy day adds to the challenges of effective implementation. But,

implementation success is achieved when RTI is scheduled as a specific block of time each day within a flexible approach framework. In contrast to pulling-out students from class during the school day, designating specific blocks of time each day for tiered instruction, while difficult for many schools, proves to be the most beneficial for academic success in students (de Haan, 2021; Venghaus et al., 2023).

Another challenge is having highly qualified teachers on staff (Safari et al., 2020). Having knowledgeable, experienced teachers to deliver interventions poses an additional obstacle for many schools since schools typically assign specific teachers to each intervention-block period (de Haan, 2021; Savitz et al., 2022; Venghaus et al., 2023). More significant gains in student learning outcomes are achieved when qualified teachers with specializations in reading or special education provide Tier 2 and 3 interventions. An additional challenge to implementation is that most Tier 2 student groupings have too many students, resulting in fewer learning gains. Many schools face staffing concerns and cannot fill the roles needed to start and maintain successful RTI implementation. Rural schools are particularly vulnerable in these aspects because of staffing shortfalls due to the lack of competitive wages and the physical geographic remoteness. Teacher turnover may be less frequent in rural areas than in other geographic settings, but without an influx of newly trained teachers, there may be less use of current instructional practices and methodologies in the classroom. Veteran teachers in rural schools may not use current instructional practices and methodologies as newly trained teachers, which may require additional professional development to address their lack of familiarity and knowledge (Gore & Rickards, 2020). Teacher characteristics are a significant issue for RTI efficacy since intervention implementation adheres to evidence-based practice; access to

effective staff development is essential (de Haan, 2021; Savitz et al., 2022; Venghaus et al., 2023).

The lack of an RTI support structure causes many implementation efforts to fail (E.R. Thomas et al., 2020; Venghaus et al., 2023). The inadequate systematic review is often the crux of implementation failure. The ongoing evaluation of RTI to improve implementation can be carried out methodically through various measures. One measure to achieve implementation success and sustainability is through an RTI leadership team composed of stakeholders from across the district. Evaluation at the district level can be valuable in the improvement efforts because RTI teams analyze data monthly to evaluate the current implementation and make suggestions for future professional and student academic growth.

Lack of intervention training through a professional development framework contributes to RTI implementation challenges (E.R. Thomas et al., 2020). Professional development that centers on developing skills to implement evidence-based interventions across all three-tiered levels helps teachers improve their teaching practices (Benedict et al., 2020; Savitz et al., 2022). Teachers become more cognizant of instruction, identifying teaching practices that help or hurt student learning. Benedict et al. add that an additional measure to support successful RTI implementation is teacher-collaboration time for intervention planning to support pedagogical practices.

Implementing evidence-based instruction at all three levels is necessary for effective RTI instruction, but doing so is challenging (Benedict et al., 2020; Savitz et al., 2022; Venghaus et al., 2023). For instance, the curriculum does not always support effective intervention instructional lessons. The reading curriculum used for Tier 1 differs in content from Tier 2 and 3 curricula, especially in middle school (Benedict et al., 2020). As a result, many teachers

experience a curriculum disconnect between the separate RTI tiers. This uncertainty is due to the Tier 1 reading curriculum at the middle-school level often does not focus on foundational skills but instead on instruction and progress monitoring.

In contrast, Tiers 2 and 3 curricula focus on abilities necessary for success in reading, such as decoding and fluency. Due to this difference, struggling readers may not ameliorate their comprehension deficits in the Tier 1 curriculum, requiring exposure to Tier 2 or 3 interventions. Understanding the complexities associated with implementing RTI within a secondary school setting may allow for greater insight into restructuring RTI so that it is more effective and can help remedy the problem of below-proficient reading comprehension.

Theoretical Framework

The theory applied to this research was the schema theory put forth by Anderson et al. (1977). A theoretical framework gives structure to the research and provides the researcher with the necessary principles to solve a problem of practice (Claxton & Michael, 2021). Reading involves the relationship between the reader and the text and its subsequent interaction. Readers use their existing schemata or knowledge structures to interpret and understand new information. Improvements in reading comprehension are most effective when guided by the bottom-up, top-down, or balanced-literacy reading models, where readers use their schemata to make sense of the text (Anderson et al., 1977; Fisher et al., 2021; Kakvand et al., 2022; Ma, 2021; Sanchez et al., 2021).

The schema theory lies within the cognitive constructivism framework initially discussed by Vygotsky, Piaget, and Bruner, emphasizing that students actively build their knowledge (Schunk, 2020). The constructivist school of thought holds that knowledge is subjective and unique to each learner. Bartlett further expanded cognitive constructivism in the 1930s to

incorporate the schemata of learners (Mondesir & Griffin, 2020). A schema is an organized abstract collection of topical knowledge or memories based on prior experience or the “small pieces of information that represent the structure of objects, person, and events” (Schunk., 2020, p. 200).

Bartlett examined the relationship between schemata on reading comprehension, finding that comprehension is affected by a reader’s familiarity with the text content, resulting in better recall and inferring information more accurately if they activate established schemata (Ding & Zhu, 2019; Ma, 2021; Sanchez et al., 2021). Reading comprehension relies heavily on linguistic and experiential knowledge, and schemata contain “variables, slots, or placeholders for each constituent element in the knowledge structure” (Anderson et al., 1977, p. 369). Students build deeper understandings through schema activation (Anderson et al., 1977; Ma, 2021; Sanchez et al., 2021). The schema theory, regarding reading comprehension, works in two concurrent directions, from the bottom up to the top and the top down to the bottom, and is governed by readers processing through bottom-up, top-down, or balanced-literacy models (Fisher et al., 2021; Ma, 2021; Mondesir & Griffin, 2020; Sanchez et al., 2021).

The goal of reading comprehension is to achieve a deep textual understanding. Comprehension improvements may be made more effectively with a combination of the bottom-up and top-down models, leading to a greater textual understanding because readers simultaneously activate schemata from all levels (Mondesir & Griffin, 2020). Improvements in below-proficiency reading comprehension may be achieved if a balanced-literacy model is implemented within the RTI tiers.

This study sought to identify areas related to the problem of sixth-grade below-proficient reading comprehension, which centers on schema activation by processing text through the

bottom-up, top-down, or balanced-literacy models; thus, schema theory is the applied theoretical framework for this study.

Summary

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The problem was that 60% of sixth-graders at Hermitage Middle could not comprehend grade-level text (NWEA, 2022). This chapter included the Narrative Review and Theoretical Framework for this research study.

Chapter Three: Procedures

Overview

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text (NWEA, 2022). This chapter of the study includes the Interview Procedures, Survey Procedures, and Document Procedures.

Interview Procedures

The first approach was semi-structured interviews with five sixth-grade and five multi-disciplinary middle-school teachers. Student interviews were conducted after permission to participate forms were signed by their parent or guardian. Teacher interviews were conducted after each had signed a permission to participate form. Participants were selected through purposeful sampling. Semi-structured interviews were the preferred option because this approach allowed the researcher to inquire further into question responses and provided the freedom to ask additional questions (Claxton & Michael, 2021). Conceptualization of language is underdeveloped in middle schoolers (Manning & Bucher, 2012), and semi-structured interviews with sixth-grade students enabled the researcher to ask further questions utilizing age-appropriate verbiage when necessary. Semi-structured interviews with teacher participants provided insight into solving the problem of below-proficient reading comprehension because of the wealth of information educational professionals could impart (Claxton & Michael, 2021). Student participants were the sixth-graders who read below grade level according to NWEA benchmark data, and were selected to represent a range of scores. Teacher participants were the entire sixth-grade instructional team.

Both student and teacher interviews were conducted on campus in a one-on-one, face-to-face setting in the Hermitage R-IV boardroom. Student interviews were scheduled during their non-academic period. Teacher interviews were scheduled during their planning periods. Each interview took 30-60 minutes and was recorded by multiple devices, including a mobile device, an iPad, and a hand-held tape recorder owned by the researcher. Recordings were transcribed, reviewed, and coded to discover key categories and themes following each interview.

Multiple analyses of interview transcripts were necessary. The use of a distinct coding system to further identify recurring words, phrases, ideas, and thoughts made comparisons of similar patterns and themes more identifiable and helped facilitate transcript analyses. Determining relationships was central; therefore, data analyses included a detailed matrix to ease coding as well as the usage of HyperRESEARCH computer-assisted software program to assist further the review process (Check & Schutt, 2012; Claxton & Michael, 2021). To answer the central research question, How can the problem of sixth-grade below-proficient comprehension be solved at Hermitage Middle School in Hermitage, Missouri?, data were collected qualitatively through 10 student-participant questions and 10 teacher-participant questions. After obtaining participants' consent to take part in the study, the following 20 questions were used for the interviews.

Interview Questions - Student Participants

1. Describe your level of motivation when reading.

The purpose of this question was to learn the inclination for reading by sixth-grade students. Reading material grows in complexity as students advance from grade to grade. Intrinsic motivation is crucial for building comprehension because it increases students' on-task behavior and reading stamina (Liao et al., 2021). The purpose for reading changes during middle

school, potentially lessening reading motivation. By asking this question, the reading motivation of the sixth-grade students at Hermitage should become apparent.

2. Describe your feelings about your reading abilities.

This question was to learn about the sixth-grade students' self-efficacy regarding their reading comprehension abilities. Sixth-grade students are at a crucial developmental stage when they are on the cusp of making comprehension gains or falling further behind (Cho et al., 2021). Reading comprehension employs great effort, motivation, and a strong belief in ability. Due to this, students who report low reading self-efficacy applied less effort, gave up quicker, and risked falling behind their peers.

3. What are your feelings toward reading aloud?

The purpose of this question was to better understand sixth-grade students' sentiments concerning reading aloud. Struggling readers often exhibit poor oral reading abilities (Zimmermann et al., 2019). Less fluent readers tend to exert greater cognitive effort with word identification and pronunciation rather than creating text meaning, unlike more apt readers who can utilize their cognitive abilities for comprehension (Nese, 2022; Zimmermann et al., 2019).

4. What teacher-instructional practices, such as graphic organizers, chunked reading, text annotating, classroom discussion, and guided notes, do you use that improve your text comprehension?

The purpose of this question was to ascertain what instructional practices the sixth-graders used that they thought improved their comprehension. Reading comprehension is a crucial determinant of academic success. Too often, struggling readers need help to recover gaps caused by ineffective instructional practices from teachers lacking reading comprehension instructional expertise, resulting in poor academic performance (Joseph et al., 2021; Wijekumar

et al., 2020). Middle schoolers often experience decreased reading enthusiasm due to underutilized engagement-centered strategies such as uninterrupted daily reading autonomy, routine teacher-student reading and writing conferences, and teacher read-alouds.

5. Describe how you respond when prompted to read a long passage instead of a short one.

The purpose of this question sought to learn sixth-grade students' responses concerning text length. Off-task behaviors increase when readers encounter harder, longer passages (Bonifacci et al., 2022; Schurer et al., 2022). Reading comprehension is further compromised due to a false perception that text length equates to being more complex. Readers instinctually interpret longer text passages as more difficult and require more effort to read and comprehend, and as a result, students experience increased rates of mind-wandering (Clinton, 2019). Comprehension of sixth-grade students may improve if readers were tasked with reading shorter text sections.

6. Discuss informational text versus fictional text in terms of comprehension.

The purpose of this question was to identify the possible reasons students believed limited their text comprehension when reading informational text. Proficient reading comprehension is partially formed on good inferencing-making. Expository or non-fiction text is more difficult for students to create inferences, thus compromising text understanding due to inadequate background knowledge (Clinton et al., 2020). Fiction or narrative-based text, in contrast, is centered on character development and everyday occurrences, resulting in increased background activation and correct inferences. By asking this question, the factors associated with non-fiction difficulty that limit comprehension may provide instructional insight for the middle school teachers at Hermitage.

7. Explain how knowing information about the text's subject matter impacts understanding the text.

This question aimed to learn if and how background knowledge created potential literacy barriers in struggling sixth-grade readers. Text connections are difficult to form when readers possess limited knowledge schemata, impairing comprehension. Recognizing familiar words and concepts activates greater prior understandings, and the broader expanse of readers' knowledge leads to greater comprehension (Cho et al., 2021; Gutierrez de Blume et al., 2020; Hattan & Alexander, 2021; O'Reilly et al., 2019).

8. What strategies help you the most with your text understanding?

The purpose of this question was to identify which instructional strategy sixth-graders think helps them the most with their comprehension. Strategies, whether used independently or in combination, can improve text comprehension and foster effective reading (Fawahid et al., 2023; Thamrin et al., 2019). Text comprehension is vital for academic success, and asking students to reflect on their learning and self-identify learning strengths and weaknesses leads to greater academic success (Ardiansyah et al., 2020; Hensley, 2020). Self-identifying which strategies, if any, struggling readers utilized to enable their comprehension may help to inform Hermitage Middle School teachers' instructional strategy use.

9. How has RTI impacted your reading comprehension?

This question determined if and how RTI, one of many heavily researched literacy interventions teachers utilize to support academically struggling students, was effective at Hermitage Middle School (C.N. Thomas et al., 2022). Students in an RTI model recover learning gaps through a multi-tiered process involving whole-group, small-group, and one-to-one instruction (Hurry et al., 2021; Nilvius et al., 2021). However, not all RTI is effective.

Individualized small-group Tier 2 interventions are preferred among middle-school-aged lower socio-economic students and yield the best improvements in reading comprehension (Hurry et al., 2021). Hermitage Middle School used RTI to ameliorate below proficiencies in reading comprehension, and identifying the aspects of its practice that lead to improvements may help to inform its efficacy.

10. Describe any difference in your text understanding when reading digitally versus printed.

This question aimed to learn if there are any inherent characteristics in digital or printed formats that sixth-graders believed limited their comprehension abilities. The reading comprehension of Hermitage Middle School sixth-graders is assessed bi-annually using the NWEA digital format. Digital text is growing in popularity due to the increased technology capabilities within the educational setting, but printed, fiction- or informational-based formats increase reading comprehension (Clinton, 2019; Haddock et al., 2019). Many students prefer printed texts over digital offerings because of the unfamiliarity, navigation, and eye strain associated with online platforms. This question was essential because it may reveal if the NWEA digital-assessment form is unreliable in accurately measuring students' comprehension abilities.

Interview Questions - Teacher Participants

1. Describe your ability to teach evidence-based literacy practices (EBLP) successfully.

This question helped to determine if teachers at Hermitage Middle School felt prepared to provide students with EBLP. Other than those who teach English, subject-area teachers feel ill-equipped to provide instruction using EBLP (C.N. Thomas et al., 2022; de Haan, 2021; E.R. Thomas et al., 2020). History, science, and math secondary-level college or university teacher-preparatory programs require more content-specific classes than those that focus on teaching reading fundamentals. Subject area teachers may gain valuable content knowledge in their

preparatory program, adding to their content expertise, but many may lack the expertise to address text comprehension difficulties in students.

2. Describe the strategies you use to support below-proficient readers.

This question helped to determine if Hermitage Middle School teachers implemented evidence-based strategies within their daily routine and instruction. Reading instruction is vital to academic success; thus, students who spend more time engaged in reading will make greater gains. Students spend half of their school day engaged in non-academic endeavors, and students in low-achieving classes spend even less time engaged in instructional purposes than those in higher-achieving classes (Toste et al., 2019). Similarly, content-specific teachers feel less prepared with providing reading instruction and literacy-rich strategies even though below-proficient readers need exposure to reading instruction and strategy practice (Brevik, 2019; C.N. Thomas et al., 2022; Wexler, Swanson, Vaughn, et al., 2019).

3. How is RTI implemented at Hermitage?

This question was asked to learn if and how Hermitage Middle School teachers implemented RTI since over half of them were new to the profession and lacked instructional experience. RTI is typically implemented proactively as a preventative strategy at the elementary level. Still, at the secondary level, it is a remediation measure (de Haan, 2021). One challenge to effective RTI implementation is the uncertainty surrounding its inclusion within secondary-educational settings because most teachers found putting core concepts, like appropriate interventions and data-based decision-making, into practice difficult (C.N. Thomas et al., 2022; de Haan, 2021; E.R. Thomas et al., 2020).

4. What problems exist with the implementation of RTI at Hermitage?

This question aimed to identify what area of RTI was problematic for Hermitage Middle

School teachers. The breadth of needs varies greatly from learner to learner, especially at the secondary level. Due to these variances, a universal format for effective RTI implementation does not exist, resulting in uncertainty about how to address the learning needs of all students (C.N. Thomas et al., 2022; E.R. Thomas et al., 2020). The answers to this question should reveal potential problems with the current RTI implementation at Hermitage.

5. Describe the area(s) of literacy your students find most difficult.

This question sought to identify what components of literacy teachers at Hermitage thought were most problematic for their sixth-grade students. Common problems like text summation, inferencing, fluency, and word recognition interfere with proficient reading comprehension, even though students who struggle with comprehension have different comprehension deficits (de Haan, 2021). Comprehension deficits among struggling readers are best remediated by focusing on varied yet specific components like phonic and vocabulary knowledge. Revealing the areas of literacy in which sixth-grade students struggled most may help improve their comprehension.

6. What RTI-focused professional development was provided during the 2022-2023 school year at Hermitage?

The purpose of this question was intended to uncover to what extent RTI-based professional development was given at Hermitage. Many teachers report that RTI-focused professional development is inadequate and not given regularly (C.N. Thomas et al., 2022). RTI-focused professional development often includes independent study through online training software, leaving many dissatisfied and underprepared. Even when RTI training is offered, the sessions tend to concentrate on particular tools, such as progress monitoring software, rather than

educating teachers on the RTI process and expectations. Moreover, some teachers report that RTI training is provided at upwards of three-year intervals, resulting in information gaps.

7. Discuss the instructional practices you use that may improve sixth-grade reading comprehension.

This question ascertained what comprehension instructional practice each teacher at Hermitage Middle School provided their students since the areas of expertise and amount of classroom experience varied. Middle schoolers too often experience decreased reading enthusiasm because teachers underutilize engagement-centered comprehension strategies (Barber & Klauda, 2020; Joseph et al., 2021). This question was essential because students' comprehension may improve by teachers adopting new instructional practices within their classrooms.

8. Explain your teacher-preparation program emphasis on reading instruction.

This question aimed to determine if Hermitage Middle School teachers thought they were prepared to provide students with reading-comprehension instruction because their preparatory programs varied. Teachers express unpreparedness about integrating reading instruction because of their college-preparatory program's focus on subject-specific content (C.N. Thomas et al., 2022; Raymond-West & Rangel, 2020).

9. Discuss how critical of a skill reading comprehension is for your subject area.

This question intended to learn if or how Hermitage Middle School teachers perceived reading comprehension as vital. The reading habits of students influence variability in reading comprehension, vocabulary, and general knowledge (Barber & Klauda, 2020). Subject-specific texts at the middle school level require focused reading because students are transitioning from learning to read to reading to learn. Middle schoolers who read more in class are more proficient

comprehenders than those who read less. However, students in subject-specific classes at the secondary level read for less than 15% of the instructional time because teachers are reading the text aloud or other students are reading most of the time (Tegmark et al., 2022).

10. Explain how you assess students' reading comprehension in your subject area.

This question was asked to identify how Hermitage Middle School teachers measured the comprehension abilities of their students. Reading comprehension tests attract more attention from researchers and policymakers because they frequently measure academic growth, spot reading difficulties, establish eligibility for grade-level promotions, and assess teacher effectiveness (Clemens & Fuchs, 2021). The primary complaint is that many reading assessments are invalid because they do not accurately measure comprehension due to the testing variances and reader characteristics. Since more emphasis is placed on comprehension assessments, teachers must assess their student's abilities with valid forms.

Survey Procedures

The second approach to collecting data in this study was a survey. A closed-ended Likert survey was given electronically using Google Forms, an internet-based program within the Google software platform, to the sixth-grade class. Surveys were a simple collection method for participants to provide exact and timely responses (Claxton & Michael, 2021). Students' responses provided valuable insights for teachers and school administrators seeking to improve reading comprehension. By allowing students to answer questions with limited options, their responses revealed their attitudes, preferences, and motivations toward reading, enabling Hermitage Middle School teachers to tailor curriculum and instruction to help solve the problem of below-proficient reading comprehension.

Survey participants were the Hermitage Middle School sixth-grade class of 20 students, 12 classified as below-proficient comprehenders and the remaining eight classified as proficient-advanced comprehenders. Surveys were an effective method to collect data from a wide range of populations. By surveying the entire class, the margin of error was reduced, increasing the trustworthiness and validity of the data collection method while reflecting the views and opinions of all students (Check & Schutt, 2012). The student participants received a Google form-generated email directing them to the survey's link after the permission to participate form was signed by a parent or guardian. The survey included directions regarding the steps required to complete three demographic-based questions followed by 10 researched-based supported prompts wherein each student participant responded using a five-point Likert scale. Student participants received the survey in one week following data collection and had a week to complete the survey; arrangements were made if more time was needed. The results were analyzed by calculating the participants' responses.

Demographic Questions

Instructions: Choose the best response for each prompt below.

1. What is your ethnicity?

White

Black/African American

Asian

Native American/Pacific Islander

Two or more Ethnicities

Other

2. What is your age?

10

11

12

13

3. What is your gender?

Female

Male

Transgender

A gender identity not listed here

Prefer not to answer

Survey Questions

Instructions: Choose one response for each prompt below.

1. My middle-school teachers have taught me reading comprehension strategies.

5

4

3

2

1

Strongly
Agree

Agree

Neutral

Disagree

Strongly
Disagree

This question revealed to what extent literacy instruction extended beyond the reading classroom. Students' reading abilities improve when exposed to literacy strategies throughout the school day while in content areas other than English (Gutierrez de Blume et al., 2020). A school-wide effort of all teachers to increase literacy practices results in more positive outcomes in students' reading comprehension abilities, leading to better-informed instructional decisions.

2. I use the same reading-comprehension strategy in my core-area classrooms.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

This question identified if sixth-grade students utilized only reading-specific strategies while being in other subject areas. Reading comprehension strategies utilized in reading classrooms are not always beneficial in improving below-proficient text comprehension in other content areas (Beaudine, 2022; Wexler, Swanson, Vaugh, et al., 2019). Subject areas such as math, science, and social studies require subject-specific or disciplinary-literacy strategies. Comprehension strategies used in reading classrooms that help with text summary, plot progression, and theme and central idea identification do not help expository-text reading requirements in content areas other than English.

3. I can improve my reading comprehension abilities.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

This question was asked to determine the growth mindset of students. The identification of students needing RTI-tiered interventions at Hermitage was data-driven. Sixth-grade students are old enough to recognize their reading comprehension abilities and understand that their participation is due to requiring additional support. Labeling students as struggling readers influences their identity, potentially leading to adverse reading outcomes (Cho et al., 2021). Tracking students based on academic abilities beyond elementary lowers teacher expectations for low-track students.

4. I can comprehend the text I read.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

This question revealed students' reports of self-efficacy and mindsets concerning their reading comprehension abilities. Comprehension requires students to be motivated and determined. Reading self-efficacy and its mediated reciprocal relationship are well documented. Students who possess firm perceptions about their abilities and believe intelligence and talents are improvable, with applied effort, experience increased reading motivation and reading comprehension over time (Cho et al., 2021). A growth mindset drives students to focus on self-improvement. Students with a positive growth mindset set improvement goals, are influenced less by social comparisons, and view difficult tasks as avenues for self-improvement. In contrast, students with fixed mindsets believe that intelligence and abilities are beyond their control and cannot improve, focusing instead on peer comparisons and external validation.

5. I make text-based connections while I read.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

This question aimed to determine if sixth-grade students made text-based connections while reading. Struggling readers need more assistance with comprehension, and to help below-proficient comprehenders become successful readers, creating text connections helps the process (Iordanaki, 2021). Purposeful reading allows students to monitor their thinking and make connections between texts and their own experiences. Connecting with the text helps readers to understand it better. Texts are more understandable when students consider their own

experiences and knowledge to ascertain the text’s meaning. Students are more engaged in reading when making authentic textual connections, leading to more significant comprehension improvements.

6. Inference-making is difficult.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

This question aimed to determine the sixth-grade students’ opinions of the difficulty level of inference-making. Proficient reading comprehension involves multiple components, such as activating background knowledge, word recognition, and textual inferencing (McDonald et al., 2021). Readers infer relationships between ideas in the text based on prior knowledge, requiring them to connect the ideas to create meaning. Readers need to make inferences to understand the authors' messages throughout the reading, making this process the cornerstone of text comprehension. Students who cannot make valid inferences struggle with text comprehension.

7. Class-assigned texts that I read are interesting.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

This question gauged the reading engagement of students. Engaging text can increase intrinsic reading motivation (Pesout & Nietfeld, 2020). Students who read texts that closely align with their interests use more effective reading comprehension strategies to enhance cognitive engagement, demonstrate a higher consistency with comprehension assessments, and experience a decrease in reading anxiety.

8. I have difficulty with spelling.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

This question revealed the students' opinions of their spelling abilities. Readers who struggle with decoding beyond elementary also struggle to know how to spell specific words or letter combinations within words, including prefixes, suffixes, and root words (Crosson et al., 2020). Middle school students write in all subject areas with greater frequency, making spelling a vital component for written expression. Spelling is a crucial component of learning English; knowing how to spell helps to understand reading material (Pan et al., 2021). Spelling and reading comprehension are strongly correlated since both are related to language skills, meaning reading comprehension improvements may involve spelling improvements.

9. I struggle with knowing how to sound out an unfamiliar word.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

This question discovered the extent of phonological and phonemic awareness of students. Reading comprehension ability is influenced by phonological awareness (Rice et al., 2023). The ability to decode nonsense words or non-words containing segmented letter sections and actual words during elementary education helped students increase their reading comprehension. In contrast, when below-proficient elementary-aged readers do not receive phonological interventions, they struggle with reading comprehension during their middle-school years, beginning in sixth grade.

10. Talking about the text helps me understand it better.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

This question revealed if students felt they benefited from text-based discussion. Students improve their ability to understand the text through purposeful textual evidence-based conversations where most gains in comprehension are made from text-focused partnered reading and discussions (Wexler, Swanson, Kurz, et al., 2019). Students who communicate with their peers and compare their text comprehension with the intention of helping one another improve their comprehension and metacognition (Pesout & Nietfeld, 2020).

Document Procedure

The third approach used to collect data was quantitative document analysis. This approach provided valuable insight through its potential corroboration with the previous two data collection methods of how to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. Document selection was driven by its genuineness, reliability, content, and significance, which included primary and secondary material such as personal reflections and organizational reports (Claxton & Michael, 2021). Archival data from the permanent records of the Department of Elementary and Secondary Education of English Language Arts Missouri Assessment Program were examined. Assessment data provided information regarding sixth-grade students' reading comprehension abilities. Students' test scores provided insight into RTI intervention development. Identifying students' areas of strength and weaknesses may help content-area teachers with individualizing learning and instructional strategies, establishing learning goals, and discovering learning gaps, all of which may solve the problem of below-proficient reading comprehension scores. After

receiving permission from the school administration, data from the Missouri Assessment Program 2022- 2023 school year was retrieved from the Department of Elementary and Secondary Education online database. The researcher accessed and analyzed the data. Claxton and Michael (2021) wrote that after selecting and securing appropriate documents, a quantitative analysis is followed up by organizing findings based on common attributes and frequencies utilizing charts or matrixes followed by graphical representation. A bar chart showed the areas of comprehension deficits and strengths. A trend chart disclosed the frequency of comprehension deficits and strengths.

Summary

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text (NWEA, 2022). This chapter presented the Interview Procedures, Survey Procedures, and Document Procedures.

Chapter Four: Findings

Overview

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text (NWEA, 2022). This chapter of the report presents the Interview Findings, Survey Findings, and Documents Findings.

Interview Findings

The first data collection approach used in this study was interviews. Semi-structured interviews consisting of 10 questions for students and 10 questions for teachers were conducted face-to-face with each participant individually. The purpose of these interviews was to identify the possible factors that affect sixth-grade reading comprehension abilities and to determine if RTI was an effective remediation. Ten participants were interviewed, including five sixth-grade students and five middle school teachers. The criteria for student-interview participation included having a below-proficient reading comprehension score and being in the sixth grade. The criterion for teacher-interview participation included being a middle school instructor. Student interviews were conducted in the middle school library during their non-academic time. Teacher interviews were conducted in their classrooms during their planning period. The purpose of the study was explained to each participant at the beginning of each interview. Each interview took 30-60 minutes and was recorded using a mobile phone owned by the researcher. Interviews were immediately transcribed, and HyperRESEARCH was used to identify common themes, trends, and phrases.

Interview Description of Student Participants

Participant One was a 12-year-old male student. He has been enrolled in the Hermitage district since the first grade. Participant One reads at the third-grade level. MAP data indicated that Participant One was below-proficient in reading comprehension. He received Tier 2 RTI services from a reading interventionist as an elementary student.

Participant Two was a 12-year-old male student. He has been enrolled in the Hermitage district since the second grade. Participant Two reads at the third-grade level. MAP data indicated that Participant Two was below-proficient in reading comprehension. He received Tier 2 RTI services from a reading interventionist as an elementary student.

Participant Three was a 12-year-old female student. She has been enrolled in the Hermitage district since the sixth grade. Participant Three reads at the fourth-grade level. MAP data indicated that Participant Three was below-proficient in reading comprehension. She did not receive Tier 2 RTI services from a reading interventionist as an elementary student.

Participant Four was a 12-year-old female student. She has been enrolled in the Hermitage district since the second grade. Participant Four reads at the fourth-grade level. MAP data indicated that Participant Four was below-proficient in reading comprehension. She received Tier 2 RTI services from a reading interventionist as an elementary student.

Participant Five was a 12-year-old male student. He has been enrolled in the Hermitage district since the third grade. Participant Five reads at the fourth-grade level. MAP data indicated that Participant Four was below-proficient in reading comprehension. He received Tier 2 RTI services from a reading interventionist as an elementary student.

Student Interview Results

Interviews were conducted with five middle school students to reveal themes related to

solving the problem of sixth-grade below-proficient reading comprehension. Qualitative data analysis began by transcribing all interviews where frequent words or phrases were noted. Frequent words and phrases were then coded, and the quotes to support each were identified. A frequency count of each code was then completed. Frequently used codes were categorized into themes, as reported in Table 1.

Table 1

Codes and Themes from Student-Interview Data

Themes	Codes	Participants' Quotes
Text Preference	Print	"I do not know why, but when I read printed text, it is much easier to understand than when I read digital text. I can highlight, circle, and underline stuff."
	Shorter	"When I have to read a long reading passage, I skim it, but when I read a short one, I read the whole thing."
Reading Strategies	Background knowledge	"Knowing information about the text's subject helps me better understand the text because I already know what everything means."
	Retelling	"Talking about the text gets it stuck in my brain, so when I get a question, I will be like, 'Ooh, I read about that.' "
	Summarizing	"I think summarizing helps me understand what I read because it is like a reminder about what is there."

Themes	Codes	Participants' Quotes
Reading Challenges	Reading aloud	“When I read aloud, I feel pressured, and I get a lot of anxiety. Reading aloud makes me nervous, and I start stuttering. I feel embarrassed, and I do not want people to make fun of me.”
	Reading motivation	“I am not motivated to read. I know I cannot read very well, and that is partly why I do not like reading.

Themes were identified, and a word search was conducted, as shown in Table 2, Themes and Frequency Codes Across Interview Data.

Table 2

Themes and Frequency Codes Across Student-Interview Data

Themes	Codes	Occurrence Across Data
Text Preference	Print	8
	Shorter	5
Reading Strategies	Background knowledge	4
	Retelling	4
	Summarizing	3
Reading Challenges	Reading aloud	9
	Reading motivation	8

Interview Description of Teacher Participants

Participant One was a first-year teacher. His duties included teaching middle school mathematics and elementary physical education. Participant One was unfamiliar with RTI

because his teacher-preparation program did not inform him of its practice. Participant One did not provide middle school students with Tier 1 and Tier 2 reading and mathematics RTI instruction in addition to his teaching duties.

Participant Two was in her 24th year of teaching. She taught high-school English for 19 of those years at Hermitage. She left the district in 2014 and returned in 2020. Her duties since her return to Hermitage have included teaching middle- and high-school English and serving as a sixth-grade RTI reading interventionist. Her extensive experience with teaching reading and applying tiered interventions resulted in quicker identification and remediation of comprehension deficiencies in students. Participant Two provided Tier 2 instruction for sixth-grade students classified as below-proficient in reading comprehension bi-weekly for 45-minute intervals.

Participant Three was a first-year teacher. His duties included teaching sixth-grade mathematics and science. He was currently enrolled in a teacher-preparation program and was not fully certified. He was hired despite his lack of a teaching certificate due to the need for math and science teachers at Hermitage. Participant Three was an alumnus of the Hermitage School District. He attended the middle school and graduated from the high school, making him familiar with RTI practices because he received intervention services while in attendance. Participant Three provided middle school students with Tier 1 and Tier 2 reading and mathematics RTI instruction in addition to his teaching duties.

Participant Four was in his seventh year of teaching. He taught history elsewhere for five years before teaching middle- and high-school social studies at Hermitage. Participant Four was unfamiliar with RTI and had limited experience with its practice because his previous school did not have an intervention program. Participant Four provided middle school students with Tier 1 and Tier 2 reading and mathematics RTI instruction in addition to his teaching duties.

Participant Five was in her third year of teaching. Her duties included teaching middle and high school agriculture science at Hermitage. She provided middle school students who scored proficient and advanced in reading and math with enrichment-based RTI instruction that included project-based activities such as woodworking and painting in addition to her teaching duties.

Teacher Interview Results

Interviews were conducted with five teachers at Hermitage Middle School to reveal themes related to solving the problem of sixth-grade below-proficient reading comprehension. Qualitative data analysis began by transcribing all interviews where frequent words or phrases were noted. Frequent words and phrases were then coded, and the quotes to support each were identified. A frequency count of each code was then completed. Frequently used codes were categorized into themes, as reported in Table 3.

Table 3

Codes and Themes from Teacher-Interview Data

Themes	Codes	Participants' Quotes
Teacher Effectiveness	Confidence	"I feel like I could do better. I know I could really work on using evidence-based instructional practices. But in my content area, I think I am fine with what I use."
	Limitations	"I think teachers did not feel prepared to teach Response to Intervention (RTI) lessons, especially when the subject matter is not within their area of expertise."

Themes	Codes	Participants' Quotes
Teacher Effectiveness	Training	"In my teacher-preparation, I never learned how to help kids read better."
Constructivism	Cooperative learning	"I pair students by ability. I find that when an advanced student is paired with one with less ability, they both learn."
	Multimodal	"Struggling readers develop skills differently. I am influenced by art, and I include art in my teaching. For instance, I use picture drawing activities and associate a word with an image."
	Self-efficacy	"Students lack confidence in their ability to read and write."
	Skill modeling	"Working with students on summarizing and clarifying of unknown words is necessary. Modeling those activities is big. Reading texts aloud by teachers allows students to hear a fluent reader."
RTI Implementation	Connections	"Students do not get the connection between RTI and classroom content. When students do not see the purpose, it hurts engagement."
	Consistency	"RTI groups are confusing for teachers and students. As teachers, we do not always know which students we have, and for students, they do not always know which classroom to go to. This inconsistency creates chaos."

Themes	Codes	Participants' Quotes
RTI Implementation	Professional development	"I received little to no training on RTI. I think there needs to be clearer guidance on how to implement Tier 2 interventions."
	Reading comprehension	"Reading comprehension skills like inferencing, knowing what words mean, and thinking abstractly are vital to my content area, and my students struggle in all those areas."

Themes were identified, and a word search was conducted, as shown in Table 4, Themes and Frequency Codes Across Interview Data.

Table 4

Themes and Frequency Codes Across Interview Data

Themes	Codes	Occurrence Across Data
Teacher Effectiveness	Confidence	5
	Limitations	4
Constructivism	Training	7
	Cooperative learning	3
	Multimodal	2
	Self-efficacy	3
	Skill modeling	7
Response to Intervention (RTI) Implementation	Connections	4
	Consistency	5
	Professional development	5

Themes	Codes	Occurrences Across Data
RTI Implementation	Reading comprehension	7

Survey Findings

The second data collection approach for this research was a Likert-scale survey. The survey contained three demographic questions and 10 Likert-scale questions. The scale consisted of five possible options from Strongly Agree to Strongly Disagree. Participants included the entire sixth-grade class at Hermitage Middle School, consisting of 20 students. After parental permission forms were signed and submitted, the participants received an email directing them to the survey, which was uploaded to Google Classroom via an embedded link. Students took the survey at the beginning of their English-instructional period. The researcher explained the purpose of the survey and expressed the importance of answering each question honestly before students opened their survey link. All surveys were completed within 10 minutes.

Survey Description of Participants

Participants included the entire sixth-grade class consisting of 20 students. All participants were between 11-12 years of age. Eighteen participants were White, and two participants were Two or More Ethnicities. Twelve participants were female, and eight were male.

Survey Results

Surveys were conducted with 20 sixth-grade participants from Hermitage Middle School to solve the problem of below-proficient reading comprehension. First, surveys were accessed on Google Forms for data analysis. Next, a table was created to display the frequency and mean of the Likert scale responses.

Table 5*Frequency and Average of Survey Responses*

Questions	Frequency	M
	1 2 3 4 5	
1. My middle school teachers have taught me reading comprehension strategies.	5 6 6 2 1	2.4
2. I use the same reading-comprehension strategy in my core-area classrooms.	1 9 5 4 1	2.8
3. I can improve my reading comprehension abilities.	9 9 2 1 0	1.9
4. I can comprehend the texts I read.	3 1 0 2 5	1.9
5. I make text-based connections while I read.	2 6 7 4 1	2.8
6. Inference-making is difficult.	4 5 1 6 4	3.1
7. Class-assigned texts that I read are interesting.	5 5 1 5 4	2.9
8. I have difficulty with spelling.	4 4 1 7 4	3.2
9. I struggle with knowing how to sound out unfamiliar words.	2 5 2 5 4	2.9
10. Talking about the text helps me understand it better.	5 5 8 2 0	2.4

Quantitative Document Analysis Findings

The third data collection approach for this study was a quantitative document analysis of the sixth-grade 2022-2023 individual performance-level Missouri Assessment Program (MAP) reports for English Language Arts (ELA). MAP reports for ELA totaled 20 tests, consisting of the results from 12 females and eight males. Printed copies of the MAP reports were retrieved

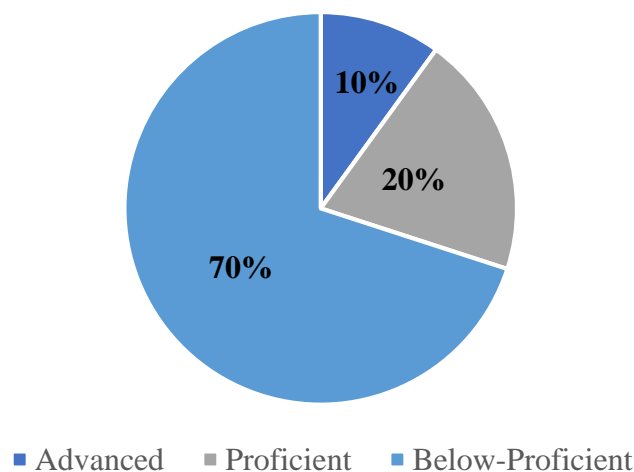
from the main office of the Hermitage Middle School. Names of students were redacted, ensuring the privacy of each participant. MAP tests for ELA assessed the levels of student learning and whether grade-level expectations were met in reading, writing, researching, and listening. A scaled score, referred to as quality points, was derived from the correct responses made by the student. A scaled score for a student was determined by averaging their earned quality points in the four tested areas. The quality points earned on the MAP, which span the three performance levels of advanced, proficient, and below-proficient and range from a scaled score of 230 to 620, indicate the knowledge that students demonstrated regarding the assessed content and skills related to ELA. Quality-point scores less than 413 were reported as below-proficient. Students who scored below-proficient did not demonstrate consistent reading skills, strategy application of narrative and informational texts, or understand academic and content vocabulary (DESE, 2021). The reports were analyzed to determine the percentage of sixth-grade below-proficiency and the impact of RTI instruction on ELA MAP scores. This analysis aimed to determine if exposure to interventions improved their reading comprehension.

Documents Results

An analysis of the MAP reports indicated that 70% of the sixth-grade students scored at the below-proficient performance level, indicating a higher percentage than initially identified through their bi-annual benchmark NWEA results. Further analysis was conducted to determine the efficacy of RTI by calculating the average MAP quality points earned by students who scored below-proficient. The analysis indicated that students who received RTI interventions had lower average scores than those who did not. The data further showed that a higher percentage of females scored below-proficient on the ELA MAP test than males.

Figure 1

Percentage of Performance Levels of Sixth-Grade 2022-2023 English Language Art (ELA) Missouri Assessment Program (MAP)

**Table 6**

Average of Qualifying Points of Sixth-Grade Students Who Scored Below-Proficient on 2022-2023 English Language Arts (ELA) Missouri Assessment Program (MAP)

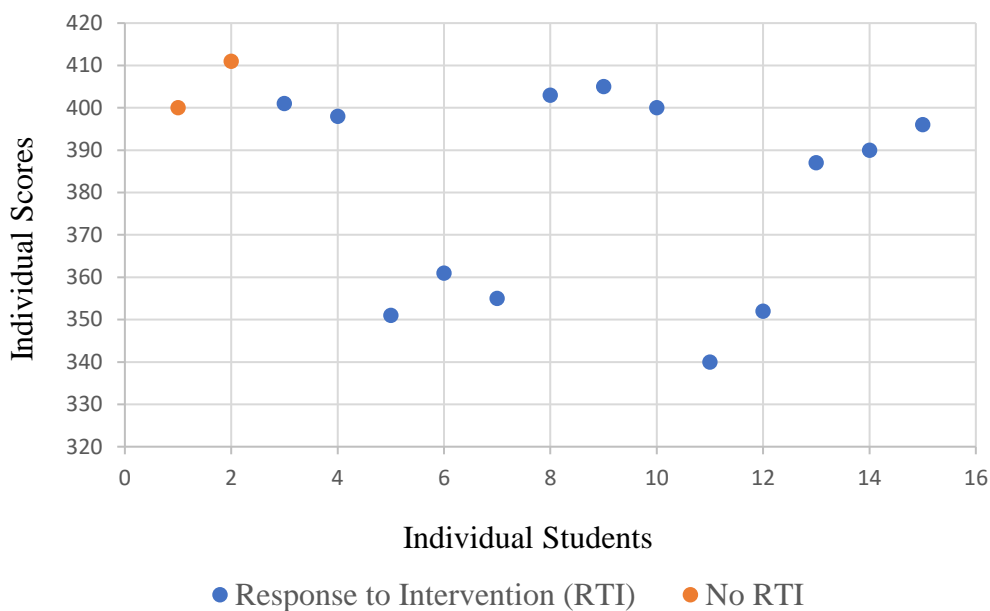
Overall	Response to Intervention (RTI)	No RTI
383	380	611

Further analysis was conducted using a graphical representation of the data. Figure 1 shows the scores of individual students who were below-proficient on the MAP for ELA in the form of a trend chart.

Figure 2

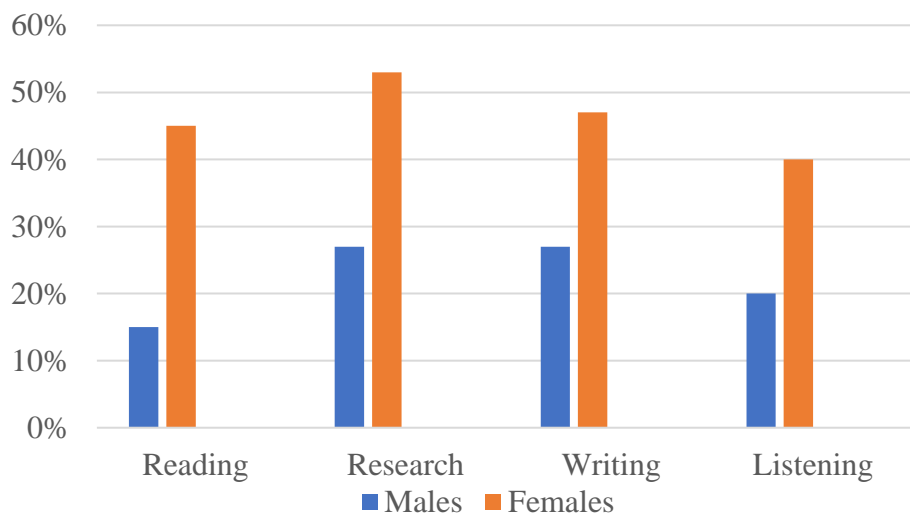
Qualifying Points of Sixth-Grade Students Who Scored Below-Proficient on 2022-2023

English Language Arts (ELA) Missouri Assessment Program (MAP)

**Figure 3**

Percentage of Sixth-Grade Students Who Scored Below-Proficient on 2022-2023 English

Language Arts (ELA) Missouri Assessment Program (MAP)



Discussion of the Findings

Three overarching themes were identified from the student interviews. The first theme was text preference, the second was reading strategies, and the third was reading challenges.

Three overarching themes were identified from the teacher interviews. The first theme was teacher effectiveness, the second was constructivism, and the third was RTI implementation. The Discussion of the Findings section will compare and contrast the data collection results from this research in this study and the scholarly literature.

The first theme that emerged from the student interviews was text preference. All student participants consistently preferred shorter reading passages over longer ones. They found shorter passages less intimidating and more manageable. One participant indicated that shorter texts required less effort, stating, "When I see a long piece of writing, I think, do I really have to read this? But, when I see a shorter passage, I get a little excited because I will get done with it fast." Most participants felt that shorter passages were easier to read due to their length. Motivation was also linked to text-length preference. One participant stated, "I'm not interested in reading anything longer than a couple of paragraphs." When asked by the researcher to explain their comment, the participant replied, "It takes so much time," emphasizing the importance of chunking texts into smaller, more manageable pieces by teachers to increase the reading motivation of students (Hussein et al., 2019). An analysis of the collected data further suggested that participants preferred printed text over digital because it allowed for physical interaction. A preference for printed text was mentioned eight times (see Table 2) by participants, expressing that this type of media made annotations such as highlighting, underlining, and marginal notes easier for them to do. This preference may suggest that participants were taught how to annotate text with printed material rather than with digital, implying they may lack an understanding of

using embedded tools in a digital format. In contrast, a review of the scholarly literature did not emphasize the ease of interaction with printed text as a prominent format preference. Students disliked digital text because of their unfamiliarity with online platforms and eyestrain, unlike the participants in this study, who expressed dislike due to feelings of disconnection (Haddock et al., 2019).

The second theme resulting from the student interviews was reading strategies. The student participants voiced that they actively used several different strategies while reading. The prominent strategies that emerged in the interviews were background knowledge, summarizing, and retelling; each was mentioned numerous times (see Table 2) in the interviews. One participant stated, "I have a hard time comprehending what I'm reading when I don't know what it's talking about. But, sometimes, I can figure it out if we talk about it." This statement revealed the importance of text-related discussion to improve comprehension. Allowing students to retell textual details may improve their understanding (Barth & Thomas, 2021; Wexler, Swanson, Kurz, et al., 2019). This aspect of text-related discussion, especially concerning reading strategies, may improve the instructional practices of teachers and their effectiveness, leading to improved sixth-grade reading comprehension scores.

The third theme revealed in the student interviews was reading challenges. All student participants expressed that reading aloud was challenging because it caused anxiety and embarrassment. Four participants expressed that they feared making mistakes and stuttering in front of others, resulting in their feelings of embarrassment. Social anxiety was mentioned as a contributing factor to their discomfort when reading aloud in front of their classmates. One student participant said, "I hate reading aloud because if I mess up, it is embarrassing, and some people may laugh at me. It gives me anxiety because it puts me on the spot and makes me

nervous." Although reading aloud was a significant challenge in the data collected during the interviews, it was not a prominent issue in the scholarly literature (Dawes et al., 2021; Manning & Bucher, 2012; X. Zhang et al., 2018). The psychosocial development of middle school students may explain their challenges. Most middle schoolers look to their peer groups for their sense of worth and identity, and they may feel anxious about reading aloud in class out of concern about potential embarrassment, especially if they perceive themselves as less proficient readers than their classmates (Manning & Bucher, 2012).

The first theme that emerged from the teacher interviews was teacher effectiveness. This theme was notable in the collected interview data and the scholarly literature. According to Raymond-West and Rangel (2020), teacher-preparatory programs differ, resulting in varying abilities in providing reading interventions, which the teachers at Hermitage Middle School similarly stated. The teachers felt a need for more confidence in delivering tiered instruction beyond their subject-area expertise because their college preparatory programs did not prepare them to teach students how to read. One of the teacher participants stated, "My major was PE. Not a lot went into reading instruction. I did minor in math, but my math classes focused on that subject rather than teaching kids to read." Teacher participants also felt limited on the help they could provide struggling readers due to uncertainty about tiered interventions to remediate reading comprehension. The data collected from the teacher interviews also emphasized their lack of training in reading instruction and interventions. Training was mentioned seven times (see Table 2 above) by participants, where each felt that professional development in RTI would be beneficial. According to Benedict et al. (2020), professional development that focused on developing skills to implement tiered interventions helped teachers improve their effectiveness.

The second theme resulting from the teacher interviews was constructivism.

Constructivist-based teaching practices such as cooperative learning, skill modeling, and using multimodality were prominent with most of the teacher participants. Constructivism was also a prominent theme of the scholarly literature. According to Ediger (2018), constructivism-based reading strategies promote engagement and connection, leading to a deeper understanding of the material, which may increase the retention and transfer of information to other contexts for the sixth-grade students. The interview data revealed that teachers relied heavily on cooperative learning strategies and felt students made greater improvements in their reading comprehension abilities with these instructional practices. According to one participant, "I use paired reading. I think when below-proficient readers are paired with more fluent students, it gives them a low-key, low-stress opportunity to learn about the text from each other." Equally prominent in the interview data was teacher-led skill modeling. Skill modeling was mentioned seven times (see Table 4 above) in the interviews. Teacher participants said they modeled how to use a graphic organizer to summarize a text, identify details to support the main idea, and locate context clues to understand unknown words, believing these practices led to greater text comprehension for struggling readers. A review of the scholarly literature also emphasized using constructivism-based teaching practices, including graphic organizers, to improve the comprehension abilities of struggling readers (Ediger, 2018). Constructivism, especially regarding the instructional practices, may improve teacher effectiveness, ameliorating sixth-grade reading comprehension scores (Ediger, 2018; de Haan, 2021; Dindar et al., 2020).

The third theme revealed in the teacher interviews was RTI implementation. This theme was dominant in the collected interview data and scholarly literature. The collected interview data revealed that the teachers at Hermitage felt RTI implementation was inconsistent, causing a

disconnection, and that if it were to be more effective at improving sixth-grade reading comprehension, it needed to be restructured. According to Savitz (2022), the key to an effective RTI was implementing a realistic schedule that efficiently used available time and qualified teachers. However, to the participants, the RTI schedule was not implemented effectively. One participant added that the current method of an alternating-day schedule made students feel confused and disconnected. Participants mentioned "consistency" and "connections" more than five times, supporting the need for RTI restructuring. According to one participant, "Students do not have a complete understanding of RTI, and as a result, they lack motivation and are unwilling to put forth the energy to do better." The interview data collected also revealed that teachers need professional development in RTI. One participant stated, "RTI responsibilities were vague." A review of the literature also supported this factor. According to Savitz et al. (2022), professional development may be needed to address the varying levels of familiarity or knowledge of intervention instruction of teachers.

The theme of RTI implementation, particularly reading comprehension, was expressed by teachers seven times (see Table 4). The interview data revealed that teachers at Hermitage observed that students needed improvements in multiple skills to increase their reading comprehension. One teacher participant shared, "Students struggle in all reading comprehension skills. I do not know if it is the age or what, but they take everything so literally. They do not understand the nuance of language. For instance, they do not get idioms." The scholarly literature also revealed that struggling readers required routine use of multiple strategies to support background knowledge, vocabulary building, and inference-making skills, reiterating the importance of intervention-focused professional development to address any unfamiliarity teachers may have concerning their usage (Barth & Thomas, 2021; Hattan & Alexander, 2021).

Two overarching themes emerged from the survey data. The first theme was reading challenges, and the second was reading strategies. Questions three and four received the lowest average median scores. All other questions received above-average median scores. Questions three and four addressed reading self-efficacy. The scores of 1.9 for questions three and four indicate that the sixth-grade students at Hermitage Middle School strongly believed in their ability to improve their comprehension despite their reluctance toward reading aloud and lack of reading motivation. According to Cho et al. (2021), reading motivation and comprehension will increase if students have a strong sense of self-efficacy and think they can improve with applied effort. However, to the teacher participants, the sixth graders lacked self-efficacy, contradicting the survey results. One teacher participant stated, "Students are unsure of themselves. They fear making mistakes, so they seek constant validation of their ability. Students always ask me, 'Am I doing it right?' or 'Am I correct?' " This contradiction may support the developmental characteristics of middle school students, suggesting that the sixth graders at Hermitage may have low self-efficacy and require reassurance from their teachers due to the fear of making a mistake because of the importance of peer validation (Cho et al., 2021; Dawes et al., 2021; Manning & Bucher, 2012; X. Zhang et al., 2019).

Questions six, eight, and nine indicated a need for reading strategies. Participants recorded that inferencing, word pronunciation, and spelling were areas of improvement, as noted in the median scores of 3.1, 3.2, and 2.9. Questions six and eight had the highest median averages, indicating that inference-making and spelling were the most difficult skills for participants to do successfully, suggesting that they may need additional strategies to improve in these two areas. Questions one, two, five, and 10 addressed the use of reading strategies. In question one, the score of 2.4 indicates that participants learned reading strategies from their

middle school teachers. In questions five and ten, the scores of 2.8 and 2.4 indicate that participants actively used reading strategies and felt successful because of them. Participants felt that their reading comprehension improved when they used strategies to activate background knowledge, summarize, and retell textual details (see Table 2). These scores suggest that the constructivism practices, particularly skill modeling (see Table 3), used by the middle school teachers were effective and helped students. In question two, the score of 2.8 indicates that participants used the same reading strategy in all their core-area classrooms, which could have been a detriment to their reading comprehension despite their feeling of success. Using the same strategy did not improve reading comprehension scores. A consideration resulting from this analysis is that improvements in sixth-grade reading comprehension scores, such as on the ELA MAP and NWEA benchmark tests, may be made if middle school teachers taught students disciplinary and content-area literacy strategies (Brock et al., 2021; Wexler, Swanson, Vaughn, et al., 2019).

An analysis of the document data showed that 70% of sixth-grade students were below-proficient in ELA. The trend chart (see Figure 2) visually displayed students who scored below-proficient on the MAP test and their RTI involvement. The data analysis showed that none who received remediation earned a score above 413 on their MAP ELA test, suggesting that RTI was ineffective. A consideration resulting from this analysis is that improvements in sixth-grade reading comprehension scores may be made if RTI instruction was implemented so that students received evidence-based remediation that focused on reading, writing, researching, and listening skills from teachers who had professional development regarding intervention instruction (Benedict et al., 2020; E.R. Thomas et al., 2020; Savitz et al., 2022). There was a notable 24% difference in the percentages of below-proficient levels in the ELA MAP reporting categories

between the genders, favoring the male students. The results revealed that sixth-grade females did not comprehend fiction and non-fiction texts or understand academic vocabulary as well as the male students. These results contradict the scholarly literature that females perform better on reading assessments than males (Manu et al., 2023). These results may suggest that the reading material in the ELA MAP test did not align with the subject-matter interests of the female students, impacting their reading motivation and negatively affecting their comprehension abilities (Lepper et al., 2022; Pesout & Nietfeld, 2020). Future research is needed to determine this disparity between the sixth-grade female and male students.

Summary

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text (NWEA, 2022). This chapter of the report presented the Interview Findings, Survey Findings, and Documents Findings.

Chapter Five: Recommendations

Overview

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text (NWEA, 2022). This chapter of the report presents the Recommendations, the Roles and Responsibilities of Stakeholders, Resources Needed, Timeline, and Summary.

Recommendations

The purpose of this study was to provide recommendations to solve the problem of below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The central research question for this study was, How can the problem of sixth-grade below-proficient reading comprehension be solved at Hermitage Middle School in Hermitage, Missouri? Based on the review of literature, data collection, and analysis, three possible solutions are recommended to answer the central research question. Below are the three recommendations:

1. Provide professional development regarding RTI
2. Create a school-wide literacy culture
3. Restructure RTI

Recommendation for Professional Development

It is recommended that middle school teachers receive monthly professional development training related to RTI to solve the problem of sixth-grade below-proficient reading comprehension scores. Professional development is the ongoing education or training offered to

teachers to help them learn new skills, stay current on trends, and advance their careers (Savitz et al., 2022; Stevens et al., 2022).

Professional development in RTI is an effective way to remediate the comprehension abilities of struggling readers because it may provide teachers with new skills and knowledge regarding interventions, enabling them to impart this information to their students (Stevens et al., 2022). The interviewed teachers expressed a need for greater clarity on implementing interventions during RTI instruction. Four of the interviewed teachers stated that professional development in RTI was not provided, resulting in their confusion about its implementation. One participant stated he felt ill-prepared and unsupported to instruct RTI reading lessons because literacy was not his area of expertise. This participant further explained that he needed a complete understanding of RTI and that if ongoing professional development were provided, he felt he would be more effective at helping struggling readers. The words “difficult,” “confusion,” and “vague” were used by the interviewed teachers to describe their responsibilities in providing RTI instruction.

The goal of professional development in RTI is to provide middle-school teachers with information on how to support struggling readers. Professional development in RTI would inform teachers of evidence-based strategies that may improve the phoneme awareness, fluency, decoding, and comprehension abilities of the struggling readers specific to this site (Osman & Warner, 2020).

Professional development can be costly for a school district. The cost of one professional development session can range from \$600.00 to \$1,100.00 per participant (Barrett & Pas, 2020). This cost may be eliminated if the instructional coach employed at Hermitage Middle School provided the professional development in RTI rather than from an outside source. A commonly

used professional development format is the workshop model, where the participants assume the roles of students and learn through their active participation (Jansen in de Wal et al., 2018). A direct benefit of professional development framed through a workshop model is that teachers may feel less overwhelmed with the process because they are actively involved rather than passively learning.

Professional development can be a time-consuming endeavor. Professional development at Hermitage is scheduled on the third Friday of each month, beginning in September. On these days, all staff members meet in the cafeteria to receive ongoing education on topics such as active shooter, technology, curriculum, and instruction from 9 a.m. to 3 p.m. However, the professional development has yet to include RTI implementation. Teachers at Hermitage Middle School may receive the added professional development more favorably if scheduled on the same day. Readjusting the professional development agenda to include a two-hour block of time for an RTI workshop would eliminate the need for additional scheduling, making better use of their time while potentially reducing their work-related stress. By doing so, this type of professional development may increase their feelings of competency and confidence because it is more tailored to their specific needs and those of their students (de Haan, 2021; Raymond-West & Rangel, 2020; Stevens et al., 2022; Venghaus et al., 2023).

Recommendation for Creating a School-Wide Literacy Culture

Based on the literature, interviews, and surveys, the second recommendation to solve the

the problem of sixth-grade below-proficient reading comprehension scores is to create a school-wide literacy culture. A literacy culture is defined as an initiative to provide students with authentic opportunities to engage with reading material and writing activities throughout the school day while in every classroom (Fadillah & Istikomah, 2021). Creating a school-wide literacy culture is recommended as part of the solution to improve sixth-grade below-proficient reading comprehension scores because this change could increase the focus on literacy among the administrators, teachers, and students.

One goal of creating a school-wide literacy culture is to promote the integration of reading and writing across all subject areas. But, strategic training in integrating such skills into daily lessons may be necessary because most of the interviewed teachers expressed that they felt ill-equipped to do so. Due to this, enlisting an instructional coach for monthly co-teaching sessions, separate from the professional development in RTI, may be necessary to ensure that the middle-school teachers have the necessary skills to promote literacy while addressing site-specific reading comprehension issues. Monthly co-teaching sessions between the middle-school teachers and the instructional coach may facilitate more opportunities to engage in thoughtful discussions about content, instruction, and pedagogy while supporting a timeframe that may provide a sufficient duration for coordinating schedules for planning, enacting, and reflecting on each co-taught lesson (Saclarides, 2023).

Students in middle school have little input about the reading curriculum (Pesout & Nietfeld, 2020). They regularly read texts they have not chosen, which may have negatively affected their motivation if the material did not align with their interests. All of the interviewed student participants expressed a dislike for reading and lacked motivation. They used words or phrases such as "dislike reading" and "unmotivated," and their frequent usage of these words

further supported the recommendation of creating a school-wide literacy culture as one possible solution to solving the problem of sixth-grade below-proficient reading comprehension scores (Fadillah & Istikomah, 2021; Nailer et al., 2023; Pesout & Nietfeld, 2020).

Reading ability, motivation, and self-efficacy are connected (Cho et al., 2021; Chou, 2019; Kula & Budak, 2020). Students with low self-efficacy who struggle with reading feel overwhelmed by this task, resulting in a lack of motivation. This connection is further impacted by reading frequency and the time devoted to its practice. Students who are routinely provided independent reading time during the school day to read self-selected texts improve their comprehension skills (Nailer et al., 2023; V.G. Collins et al., 2022).

Another goal of creating a school-wide literacy culture is to improve the reading motivation of sixth-grade students. The school schedule at Hermitage operates on 45-minute periods, which could allow for independent reading time during the first 20 minutes of each class on one designated day each week. Doing so will provide students with a consistent, extended amount of time to read self-selected material while minimizing the loss of classroom instruction, which could increase reading motivation and self-efficacy, promote literacy practices, and potentially improve sixth-grade below-proficient comprehension scores (Nailer et al., 2023).

The creation of a school-wide literacy culture can be met with resistance from teachers who are reluctant to change. Teachers accustomed to their practices may be skeptical of change and reject participating due to their feelings. Also, creating a school-wide literacy culture requires effort, and teachers may feel pressured to balance new demands with their existing responsibilities, which may increase their stress. However, a school-wide focus on literacy can lead to increased reading and writing skills in students, which are fundamental to success in all subjects. Reading comprehension skills of students have been on the decline (NAEP, 2023). Yet,

if a literacy culture was created, students may be more engaged in reading and writing, increasing their motivation and attentiveness to their learning (Nailer et al., 2023; Fadillah & Istikomah, 2021). Also, a literacy culture can help foster a lifelong love of reading, which extends beyond the years spent in school. A strong literacy foundation can lead to improved reading comprehension, positively impacting the reputation of the school and district (Gerber, 2021).

Recommendation for Restructuring RTI

The final recommendation suggested to solve the problem of sixth-grade below-proficient reading comprehension is restructuring RTI at Hermitage Middle School from its current practice. Four of the interviewed teachers expressed that RTI should be restructured. The RTI approach implemented at Hermitage Middle School can be best described as a standard protocol model in which a broad reading comprehension issue is targeted, and instruction is provided to help remediate the deficiency. Sixth-grade students at Hermitage receive Tier 2 reading RTI instruction for 45 minutes on Mondays and Wednesdays, alternating the days from the provided math services during the school week.

One goal of restructuring RTI is to provide instructional consistency. Four interviewed teachers stated that the alternating RTI schedule confused them and their students. One teacher stated, “Students are always asking which day it is. Most days, they do not know if it is a math or reading day.” It is recommended that students receive Tier 2 reading RTI every day instead of on an alternating schedule because consistency may lessen their confusion (Moon et al., 2021).

Another goal of restructuring RTI is to provide struggling readers with a curriculum that addresses issues specific to the sixth-grade students. The students interviewed and surveyed reported that they lacked several skills related to reading comprehension. Three students who

were interviewed stated they disliked reading because they stuttered (see Table 2) due to their hesitation while reading aloud, suggesting that this may be an issue of fluency and word pronunciation. In addition to the information gleaned from the interviews, 45% of surveyed students reported having difficulty with spelling and making text-based inferences (see Table 5). Current RTI lesson materials and topics covered were the same for each intervention group with no regard to ability level or areas of deficit. Implementing a curriculum designed to address the individual issues stated by the sixth-grade students may improve the below-proficient reading comprehension scores at Hermitage.

Restructuring RTI may require changing the school schedule. Middle-school students at Hermitage attend nine 45-minute core, RTI, and study hall classes. In order to provide struggling readers with daily Tier-2 interventions, their study hall may need to be eliminated and replaced with an additional RTI class so they can receive reading interventions every day rather than on an alternating schedule. Also, purchasing a curriculum designed for struggling readers can be expensive, estimated at \$790.00 to \$2290.00 per student (Scammacca et al., 2020). One solution to offset the cost is to use free resources created by the Strategic Education Research Partnership Institute (SERP), such as the Strategic Adolescent Reading Intervention (STARI) curriculum designed for middle-school students who read below grade level (SERP, 2024, Strategic Adolescent Reading Intervention section, para. 2).

Professional development, a school-wide literacy culture, and restructuring RTI are intended to improve the instructional practice of teachers so that students benefit from their added knowledge related to literacy and intervention application. These opportunities for added professional development, a literacy culture, and restructuring RTI are designed to solve the

problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School.

Roles and Responsibilities of Stakeholders

The roles and responsibilities of stakeholders need to be disclosed to solve the problem for this research study. It is necessary to provide a plan for implementing the recommendations and who will be responsible for which tasks. The roles and responsibilities for providing professional development, creating a school-wide literacy culture, and restructuring RTI are described in this section.

Professional Development

In order to solve the problem of sixth-grade below-proficient reading comprehension scores, it is recommended that professional development that is directly related to RTI intervention instruction be provided to the middle-school teachers at Hermitage Middle School. Defining the roles and responsibilities of those involved in the professional development is crucial to ensure its success.

Community

The role of the community regarding professional development in RTI is to ensure that the middle-school teachers at Hermitage engage in continuous learning and impart that information to students. The community is responsible for providing input and giving feedback on student reading performance, as this may result in informed decision-making regarding professional development. The community will provide input and give feedback yearly through a Google form-generated survey uploaded to the school website by the administrators.

School Board

The role of the school board in providing professional development in RTI is to approve

of the expense associated with the materials and resources required for this recommendation and evaluate its effectiveness at improving sixth-grade reading comprehension scores.

Administrators

The role of the administrators in providing professional development in RTI is to offer guidance and support and act as facilitators. The responsibilities of the administrators, including the middle-school principal, instructional coach, and counselor, are to schedule the professional development and ensure that the sixth-grade teachers learn intervention strategies that may ameliorate reading comprehension issues specific to this site. Administrators will not need to hire new staff members to implement this recommendation, as the instructional coach will be responsible for the needed materials and resources, including the community and student Google-form generated surveys and workshop presentations. Professional development in RTI is recommended to address the themes of this research, including teacher effectiveness, RTI implementation, and reading strategies.

Teachers

Professional development workshops should include all sixth-grade teachers responsible for RTI instruction. Their primary responsibility is to attend and participate in the eight professional development workshops regarding RTI interventions. The first workshop should address reading motivation. Teachers would learn about the importance of setting and establishing a purpose for reading to help students increase motivation (Mackey, 2021). The second workshop should address phonics and phonemic awareness. Teachers would learn about consonant and vowel letter combinations and the corresponding sounds of each to help students with pronouncing unfamiliar words (Duke et al., 2021). The third workshop should address word decoding. Teachers would learn how to divide a word by its prefixes, roots, and suffixes to help

students determine word meanings by individual segments (Lawrence et al., 2019, 2021). The fourth workshop should address guided oral reading. Teachers would learn the steps of modeling and repeated readings to help students with fluency (Osman & Warner, 2020; Wolters et al., 2020). The fifth and sixth workshops should address reading with expression and accuracy. Teachers would learn the importance of maintaining a natural reading pace and expression, using punctuation marks, and paying close attention to the words to help students improve prosody (Wolters et al., 2020). The seventh and eighth workshops should address reading comprehension strategies. Teachers would learn how to encourage students to make text-based connections to build background and vocabulary knowledge, which may improve comprehension abilities (Hattan & Alexander, 2021). The monthly professional development workshops aim to boost teacher efficacy and familiarity with RTI interventions, which may ameliorate sixth-grade below-proficiency reading comprehension scores.

Students

The role of the students regarding professional development in RTI is to provide their input and give feedback concerning their reading comprehension and the intervention strategies used by their teachers. The primary purpose of professional development in RTI is to improve sixth-grade reading comprehension scores, so their input and feedback are crucial since reading strategies were one of the themes identified from the interviews and surveys. Students will provide input and feedback on the RTI strategies used by their teachers every quarter through a Google form-generated survey sent to their school email accounts by the administrators as a proactive measure so that curriculum and instruction can be readjusted if needed.

Creating a School-Wide Literacy Culture

In order to solve the problem of sixth-grade below-proficient reading comprehension

scores, it is recommended that a school-wide literacy culture be created at Hermitage Middle School. Defining the roles and responsibilities of those involved is crucial to ensure its success.

Community

The role of the community in creating a school-wide literacy culture is to provide support for the students and teachers at Hermitage Middle School through partnership opportunities.

Local businesses can donate prizes, such as gift cards, services, and products, to reward students and teachers for reading accomplishments in school programs, challenges, and state assessment tests. Community members, including the parents, booster club, and parent-teacher association, can sponsor monthly trips to the local library, ensuring students have access to literature outside of school, and lead fundraising activities, such as raffles and bake sales, helping fund literacy programs not covered by the middle school budget.

School Board

The primary role of the school board is to approve the expense and purchase of the materials and resources required for this recommendation and evaluate the effectiveness of a literacy-focused instructional curriculum. Another role of the school board is to engage in ongoing communication with the community regarding the priorities and progress toward creating a literacy culture. The responsibility of the school board is to invite the community to public forums held during the monthly board meetings to inform those in attendance of partnership opportunities.

Administrators

The role of the administrators in creating a school-wide literacy culture is to provide leadership. The administrators will monitor the development and progress of the school-wide

literacy culture to ensure its effectiveness. Fadillah and Istikomah (2021) recommended the following:

1. Assess the current state of literacy within the school.
2. Form a literacy team that includes administrators and teachers.
3. Develop a school-wide literacy plan that is unique to the needs and challenges of Hermitage.
4. Align the goals of the literacy plan to curriculum and instructional materials.
5. Implement a system for regular assessment and data collection to monitor progress. This will identify areas for improvement and tailor individual instruction to student needs.
6. Integrate and encourage literacy across all subject areas so that teachers will incorporate reading and writing activities into their lessons.
7. Establish reading enrichment programs such as book clubs or reading challenges to foster a love of reading.
8. Promote a reading-friendly environment in the school.
9. Celebrate student achievements and recognize them by giving awards, certificates, and public acknowledgment.

The hiring of additional teachers or staff members is not required. The instructional coach is responsible for informing teachers of literacy instructional practices.

Teachers

The role of the teachers in creating a school-wide literacy culture is to support administrators in achieving the established goals of the plan by participating in the process. The purpose of the school-wide culture is to promote reading and writing by the English, science, social studies, and math middle-school teachers. A literacy-focused curriculum may foster these skills in students, resulting in improved sixth-grade reading comprehension scores. Teachers may

require knowledge on integrating literacy, so assistance from the instructional coach employed at Hermitage is recommended (Saclarides, 2023). The middle-school teachers will collaborate with the instructional coach once a semester, where they will teach a lesson together and meet afterward to discuss literacy pedagogy and student data.

Students

The role of the students in creating a school-wide literacy culture is to support the administrators and teachers in achieving the established goals of the plan by participating in the process. Sixth-grade students should select and read texts separate from class-assigned material to gain pleasure from reading, increasing their reading motivation, which may improve their comprehension.

Restructuring RTI

In order to solve the problem of sixth-grade below-proficient reading comprehension scores, it is recommended that RTI at Hermitage Middle School be restructured from its current implementation. The roles and responsibilities of those involved in the restructuring are important to define to ensure success.

Community

The role of the community in restructuring RTI is to support Hermitage Middle School through volunteer opportunities. Community members should volunteer their time to help students with reading during RTI classes. Volunteers can read to students, which may model fluent reading. Volunteers can also listen to students read, which may increase reading confidence and motivation (Zimmermann et al., 2019).

School Board

The role of the school board in restructuring RTI is to approve curriculum adoption

before its implementation and to provide an evaluation of instructional programs. The school board also represents the community. The responsibility of board members should include volunteering their time to help students with reading during RTI classes.

Administrators

The role of the administrators concerning restructuring RTI is to provide leadership and direction to facilitate the process. The responsibilities of the administrators, including the middle-school principal, instructional coach, and counselor, at Hermitage Middle School are to set academic goals and ensure that teachers have the resources to achieve them, collect evidence, and evaluate if restructuring RTI is effective. To do so, the administrators and the middle-school teachers should meet quarterly to discuss student progress, goals achievement, and needed resources. The instructional coach will facilitate the monthly SERP Institute professional learning series sessions with the middle-school teachers beginning in August. The instructional coach will create and email a Google-generated survey every quarter for students to provide input and give feedback regarding the STARI curriculum. Administrators will not need to hire new staff members to implement this recommendation.

Teachers

Restructuring RTI should involve the middle-school teachers whose teaching duties include RTI. The primary purpose of restructuring RTI is to increase its efficacy. The responsibilities of the middle-school teachers are to attend quarterly meetings with the administrator, complete the SERP Institute professional learning series sessions, and implement the STARI curriculum with complete fidelity, as doing so may improve the reading comprehension abilities of sixth-grade students at Hermitage Middle School.

Students

The role of the students in restructuring RTI is to provide their input and give feedback concerning the efficacy of the STARI curriculum and reading strategies. Students will provide their input and give feedback every quarter through a Google form-generated survey sent to their school email accounts by the administrators as a proactive measure for potential curriculum and instruction adjustment.

Resources Needed

The resources needed to solve the problem for this research study must be considered. It is important to provide a detailed plan concerning the allocation of time, materials, and funds required for the recommendations related to this study. The resources are described in this section.

Professional Development

The resources needed for professional development in RTI include time, materials, and funding. Administrators at Hermitage Middle School typically schedule eight in-service workdays for teachers to attend professional development during the school year, beginning in September. Time is a valuable resource, so this cost in time can be mitigated if the professional development in RTI is scheduled on the same in-service workdays.

Licenses to access the SERP Institute professional learning series are also recommended. The SERP Institute professional learning series supplements the STARI curriculum and is tailored to fit within the professional development structures already existing at schools. Each session within the series provides teachers with opportunities to learn STARI strategies and how to implement their curriculum correctly to maximize its efficacy. There are 17 sessions included in the SERP Institute professional learning series. There are three licensing options available

(SERP, 2024, Three Options to Access the STARI Professional Learning Series section, para. 5). The first option is a self-paced single license that teachers access independently online. A single license costs \$375.00 for each teacher. The total cost would be \$1,500.00 for four teacher licenses. The second option is a teacher plus facilitator combination license for in-person, collaborative professional development. A teacher license costs \$375.00 for each teacher, and a facilitator license costs \$675.00 for each facilitator license. The total cost would be \$2,175.00 for four teacher licenses and one facilitator license. The third option is a facilitator license intended for large group presentations. A facilitator license costs \$3,000.00. Professional development is more meaningful as a collaborative experience (Savitz et al., 2022; SERP, 2024, Three Options to Access the STARI Professional Learning Series section, para. 1; Stevens et al., 2022). The purchase of a facilitator license would give the instructional coach access to the professional learning series presentation version to project to a small group of in-person participants, supporting collaboration with the middle-school teachers. The second option also gives teachers online access to the professional learning series content, ensuring that missed sessions are completed and information is reviewed. Given that the four middle-school teachers responsible for RTI instruction are learning in-person and as a small group with the instruction coach, the second option may be the best choice for Hermitage despite the added cost. The added cost may be a wise investment since the information imparted in the professional learning series sessions may result in greater teacher efficacy in using the STARI curriculum and RTI, resulting in improved sixth-grade reading comprehension scores. Funding for this recommendation would be provided from the Hermitage Middle School budget.

Creating a School-Wide Literacy Culture

The resources required for creating a school-wide literacy culture are time, materials, and

funding. An assessment of the current state of literacy and the development of an actionable plan based on those findings require administrators and teachers to devote additional time to this activity. The changing demands of an administrator on a typical school day, combined with teachers at Hermitage Middle School not sharing similar schedules, may cause this task to be completed through email.

The purchase of an online program for reading assessment and data collection is another recommended resource. An online program, like i-Ready, consists of a diagnostic reading assessment and an individualized instruction component. i-Ready provides teachers with actionable, intuitive data that may help better inform their decision-making concerning literacy practices. Schools must purchase at least 150 student licenses, costing \$34.75 each, with a total cost of approximately \$5,212.50 for a year subscription (Curriculum Associates, 2023). The materials required for the collaborative teaching sessions with the middle-school teachers and instructional coach can be from free materials found on the internet.

The purchase of new furniture and books for the middle school library is also recommended. Students need reading-friendly spaces (Fadillah & Istikomah, 2021). The library currently has six octagon-shaped tables with hard-backed chairs, and purchasing new reading-friendly furniture to replace three of those six tables would enhance the environment and make it more inviting to readers. The purchase of the new replacement furniture, consisting of six casual-style rockers at a cost of \$160.00 for each, and three side tables at a cost of \$120.00 for each, would be a total cost of \$1,320.00 (School Outfitters, 2023). Students are more motivated to read independently when the text aligns with their interests (Nailer et al., 2023; V.G. Collins et al., 2022). The middle school library currently has 1,000 books, 80% of which are 20 years old or

older. It is recommended that 100 of the latest realistic fiction, fantasy, science fiction, and graphic novels, selected and ordered by the school librarian, be purchased to replace 10% of the most outdated and least popular titles. The purchase of new books to replace the outdated and unpopular titles may address the current interests of students, potentially increasing their independent reading engagement and motivation (Lepper et al., 2022; Pesout & Nietfeld, 2020). The current yearly budget for new library books is \$700.00. The total cost for 100 new replacement books would be \$500.00, averaging \$5.00 per title, and \$200.00 under budget (Scholastic, 2023). Funding for this recommendation would be provided from the Hermitage Middle School budget.

Restructuring RTI

The resources required for this recommendation are instructional time, materials, and funding. Sixth-grade students at Hermitage Middle School currently attend a 45-minute study hall supervised by the teachers whose responsibilities include RTI instruction. Adjusting the schedule by eliminating the study hall and replacing it with an RTI class may add additional instructional responsibilities for the teachers, but the adjustment would allow students to receive interventions daily, which could result in greater RTI efficacy, potentially improving reading comprehension scores (Nilvius & Svensson, 2021).

The STARI curriculum from the SERP Institute is another recommended resource. The STARI curriculum is currently free to download from its website. However, the curriculum requires the use of multiple novels. There are three units of study in the sixth-grade curriculum series, each requiring the use of three to four different novels. A classroom set comprising these 15 novels would have a total cost of \$1,800.00 (SERP, 2024, STARI Amazon Store section). The

cost of the novels is a one-time expense since they can be used for many years. Funding for this recommendation would be provided from the Hermitage Middle School budget.

Timeline

The plan for when the recommendations will be implemented is necessary to help solve the problem for this research study. The timeline for providing professional development in RTI, creating a school-wide literacy culture, and restructuring RTI is explained in this section.

Professional Development

Implementation of professional development directly related to RTI will take approximately eight months. See Table 7 for the Timeline of Professional Development Implementations schedule.

Table 7

Timeline of Professional Development in Response to Intervention (RTI) Implementation

Date	Action Item
August 15, 2024	Administrators and the instructional coach announce to teachers the inclusion of the workshop model and the focused RTI skills.
September 20, 2024	Middle-school teachers attend the <i>Improving the Reading Motivation of Students</i> professional development workshop.
October 18, 2024	Middle-school teachers attend the <i>Phonetics and Phonemic Awareness</i> professional development workshop.
November 15, 2024	Middle-school teachers attend the <i>Word Decoding through Affixes and Roots</i> professional development workshop.
December 20, 2024	Middle-school teachers attend the <i>Modeling Guided Reading</i> professional development workshop.

Date	Action Item
January 17, 2025	Middle-school teachers attend the <i>Fluency through Reading for Expression and Accuracy</i> professional development workshop.
February 21, 2025	Middle-school teachers attend the second <i>Fluency through Reading for Expression and Accuracy</i> professional development workshop.
March 21, 2025	Middle-school teachers attend the <i>Comprehension Strategies Using Text-Based Connections to Build Background Knowledge</i> profession development workshop.
April 18, 2025	Middle-school teachers attend the <i>Comprehension Strategies Using Text-Based Connections to Build Vocabulary Knowledge</i> professional development workshop.

Implementation of creating a school-wide literacy culture will take approximately 16 months. See Table 8 for the Timeline of Creating a School-Wide Literacy Culture Implementation schedule.

Table 8

Timeline of Creating a School-Wide Literacy Culture Implementation

Date	Action Item
May 15, 2024	The librarian purchases furniture and books for the library.
August 15, 2024	The administrators and the instructional coach introduce the concept of a school-wide literacy culture to the middle-school teachers at the first in-service day.

Date	Action Item
August 20, 2024	Three days before the first day of school, assemble and arrange the furniture and books. Administrators share the web-based survey with teachers to assess the current state of literacy at Hermitage Middle School.
August 26, 2024	Administrators share the web-based survey with teachers to assess the current state of literacy at Hermitage Middle School.
September 27, 2024	Administrators, with the input from selected teachers, create the literacy plan and decide the actionable goals.
October 15, 2024	The middle-school English teachers and instructional coach teach a lesson together.
October 17, 2024	The middle-school English teachers meet with the instructional coach to discuss their co-teaching experience and student-literacy data.
October 18, 2024	The middle-school teachers, instructional coach, and administrators meet to discuss the results of the literacy survey and share the actionable goals.
November 12, 2024	The middle-school science teachers and instructional coach teach a lesson together.
November 14, 2024	The middle-school science teachers meet with the instructional coach to discuss their co-teaching experience and student-literacy data.
December 17, 2024	The middle-school social studies teachers and instructional coach teach a lesson together.
December 19, 2024	The middle-school social studies teachers meet with the instructional coach to discuss their co-teaching experience and student-literacy data.

Date	Action Item
January 3, 2025	The middle-school teachers, instructional coach, and administration meet to share their feelings and observations about the new culture.
January 14, 2025	The middle-school math teachers and instructional coach teach a lesson together.
January 16, 2025	The middle-school math teachers meet with the instructional coach to discuss their co-teaching experience and student-literacy data.
February 11, 2025	The middle-school English teachers and instructional coach teach a lesson together.
February 13, 2025	The middle-school English teachers meet with the instructional coach to discuss their co-teaching experience and student-literacy data.
March 18, 2025	The middle-school science teachers and instructional coach teach a lesson together.
March 20, 2025	The middle-school science teachers meet with the instructional coach to discuss their co-teaching experience and student-literacy data.
April 15, 2025	The middle-school social studies teachers and instructional coach teach a lesson together.
April 17, 2025	The middle-school social studies teachers meet with the instructional coach to discuss their co-teaching experience and student-literacy data.
May 19, 2025	The middle-school teachers, instructional coach, and administrators meet to discuss the results of the literacy plan and goals.
August 21, 2025	The middle-school teachers, instructional coach, and administrators reassess the state of literacy at Hermitage Middle School and realign goals if necessary.

Restructuring RTI

Implementation of restructuring RTI will take approximately 11 months. See Table 9 for the Timeline of Restructuring RTI Implementations schedule.

Table 9

Timeline of Restructuring Response to Intervention (RTI) Implementation

Date	Action Item
June 17, 2024	The administrators and instructional coach present the Strategic Adolescent Reading Intervention (STARI) curriculum and Strategic Education Research Partnership (SERP) learning series to the school board.
August 20, 2024	The middle-school teachers and the instructional coach complete sessions one through five of the SERP learning series.
September 20, 2024	The middle-school teachers and the instructional coach complete sessions six through eight of the SERP learning series.
October 18, 2024	The middle-school teachers and the instructional coach complete sessions nine and 10 of the SERP learning series.
November 15, 2024	The middle-school teachers and the instructional coach complete sessions 11 and 12 of the SERP learning series.
December 20, 2024	The middle-school teachers and the instructional coach complete session 13 of the SERP learning series.
January 3, 2025	The middle-school teachers, instructional coach, and administrators meet to discuss RTI.
February 21, 2025	The middle-school teachers and the instructional coach complete sessions 14 and 15 of the SERP learning series.

Date	Action Item
March 21, 2025	The middle-school teachers and the instructional coach complete session 16 of the SERP learning series.
April 18, 2025	The middle-school teachers and the instructional coach complete session 17 of the SERP learning series.
May 19, 2025	The middle-school teachers, instructional coach, and administrators meet to evaluate RTI implementation and student progress.

Summary

The purpose of this study was to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension scores at Hermitage Middle School in Hermitage, Missouri. The problem was that 60% of the sixth-grade students at Hermitage Middle School could not comprehend grade-level text (NWEA, 2022). This chapter of the report presented the Recommendations, the Roles and Responsibilities of Stakeholders, Resources Needed, Timeline, and Summary. Three recommendations were made, including providing professional development in RTI, creating a school-wide literacy culture, and restructuring RTI.

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Appendices

Appendix A



January 9, 2023


Dear Shannon Beers,

After careful review of your research proposal entitled, *Recommendations to Solve the Problem of Low Sixth-Grade Comprehension Proficiency Scores at Hermitage Middle School in Hermitage, Missouri*, I have decided to grant you permission to conduct your research at Hermitage Middle School.

Sincerely,

Appendix B

Parental Consent to Participate Form

	<p>Hermitage R-IV</p> <p>“It’s a GREAT day to be a Hornet!”</p>	Hermitage R-IV Schools P.O. Box 327 23824 Polk Street Hermitage, MO 65668 Phone: 417-745-6418 Fax: 417-745-6475
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August 22, 2023

Hello,

I invite you and your student to take part in a research study being conducted by Mrs. Shannon Beers, who is a teacher at Hermitage Middle School, as part of my Doctoral Research entitled, *Recommendations to Solve the Problem Low 6th-Grade Comprehension Proficiency Scores at Hermitage Middle School in Hermitage, Missouri*. The study, as well as your rights as a participant, are described below.

Description: The purpose of this study is to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension. Students will take a 10-question survey and may be interviewed by me. Survey and interview questions center on reading comprehension and the interventions commonly utilized by teachers to remediate student learning gaps.

Confidentiality: Students’ answers will not be associated with their names. Instead, each student will be given an identification number on the survey and interviewer’s sheet.

Risks & Benefits: There are no risks to your student’s safety. You may opt-out without penalty or bias. Because the study seeks to solve a problem, potential benefits to your student’s participation include an authentic perspective, targeted interventions, and direct impact.

Questions? Please feel free to ask any questions before signing the consent form or at any time during or after the study.

Researcher: Shannon Beers,

Informed Consent Statement I, _____, give permission for my child, _____ to participate in the research project entitled, *Recommendations to Solve the Problem Low 6th-Grade Comprehension Proficiency Scores at Hermitage Middle School in Hermitage, Missouri*. The study has been explained to me, and my questions have been answered satisfactorily. I understand that my child’s right to withdraw from participating or refuse to participate will be respected and that their responses and identity will be kept confidential. I give this consent voluntarily.

Parent/Guardian Signature: _____

Appendix C

Teacher Consent to Participate Form

	<p>Hermitage R-IV</p> <p>“It’s a GREAT day to be a Hornet!”</p>	Hermitage R-IV Schools P.O. Box 327 23824 Polk Street Hermitage, MO 65668 Phone: 417-745-6418 Fax: 417-745-6475
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August 22, 2023

Hello,

I invite you to participate in a research study being conducted by Mrs. Shannon Beers, a teacher at Hermitage Middle School, as part of my Doctoral Research entitled Recommendations to Solve the Problem of Low 6th-Grade Comprehension Proficiency Scores at Hermitage Middle School in Hermitage, Missouri. The study and your rights as a participant are described below.

Description: The purpose of this study is to provide recommendations to solve the problem of sixth-grade below-proficient reading comprehension. I may interview some teachers. The interview questions center on reading comprehension and the interventions commonly utilized by teachers to remediate student learning gaps.

Confidentiality: Teachers’ answers will not be associated with their names. Instead, each teacher will be given an identification number on the survey and interviewer’s sheet.

Risks & Benefits: There are no risks to your safety. You may opt-out without penalty or bias. Because the study seeks to solve a problem, there are potential benefits to teachers’ participation that include an authentic perspective, targeted interventions, and direct impact.

Questions? Please feel free to ask any questions before signing the consent form or at any time during or after the study.

Researcher: Shannon Beers,

Informed Consent Statement I, _____, give permission for my consent to participate in the research project entitled, Recommendations to Solve the Problem of Low 6th-Grade Comprehension Proficiency Scores at Hermitage Middle School in Hermitage, Missouri.” The study has been explained to me, and my questions have been answered satisfactorily. I understand that my child’s right to withdraw from participating or refuse to participate will be respected, and their responses and identity will be kept confidential. I give this consent voluntarily.

Teacher Signature: _____

Appendix D

Student Interview Questions

1. Describe your level of motivation when reading.
2. Describe your feelings about your reading abilities.
3. What are your feelings toward reading aloud?
4. What teacher-instructional practices, such as graphic organizers, chunked reading, text annotating, classroom discussion, and guided notes, do you use that improve your text comprehension?
5. Describe how you respond when prompted to read a long passage instead of a short one.
6. Discuss informational text versus fictional text in terms of comprehension.
7. Explain how knowing information about the text's subject matter impacts understanding the text.
8. What strategies help you the most with your text understanding?
9. How has RTI impacted your reading comprehension?
10. Describe any difference in your text understanding when reading digitally versus printed.

Appendix E

Teacher Interview Questions

1. Describe your ability to teach evidence-based literacy practices (EBLP) successfully.
2. Describe the strategies you use to support below-proficient readers.
3. How is RTI implemented at Hermitage?
4. What problems exist with the implementation of RTI at Hermitage?
5. Describe the area(s) of literacy your students find most difficult.
6. What RTI-focused professional development was provided during the 2022-2023 school year at Hermitage?
7. Discuss the instructional practices you use that may improve sixth-grade reading comprehension.
8. Explain your teacher-preparation program emphasis on reading instruction.
9. Discuss how critical of a skill reading comprehension is for your subject area.
10. Explain how you assess students' reading comprehension in your subject area.

Appendix F

Survey

Instructions: Choose the best response for each prompt below.

1. What is your ethnicity?

- ☐ White
- ☐ Black/African American
- ☐ Asian
- ☐ Native American/Pacific Islander
- ☐ Two or more Ethnicities
- ☐ Other

2. What is your age?

- ☐ 10
- ☐ 11
- ☐ 12
- ☐ 13

3. What is your gender?

- ☐ Female
- ☐ Male
- ☐ Transgender
- ☐ A gender identity not listed here
- ☐ Prefer not to answer

Survey Prompts

Instructions: Choose one response for each prompt below.

1. My middle school teachers have taught me reading comprehension strategies.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

2. I use the same reading-comprehension strategy in my core-area classrooms.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

3. I can improve my reading comprehension abilities.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

4. I can comprehend the text I read.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

5. I make text-based connections while I read.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

6. Inference-making is difficult.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

7. Class-assigned texts that I read are interesting.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

8. I have difficulty with spelling.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

9. I struggle with knowing how to sound out an unfamiliar word.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

10. Talking about the text helps me understand it better.

5	4	3	2	1
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree