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Teachers' Perceptions of Practices that May Contribute to Reading Proficiency in Massachusetts Elementary Schools

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This is to certify that the doctoral dissertation by

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has been found to be complete and satisfactory in all respects,
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Walden University
2024

Abstract

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MEd, University of Louisville, 2006

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Education

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February 2024

Abstract

Sixty-eight percent of fourth-grade public school students in the United States performed below the National Assessment of Educational Progress proficient level on the 2022 reading assessment, yet Massachusetts fourth-grade students demonstrated better reading outcomes. The problem addressed through this study was a lack of knowledge regarding the practices used by third- and fourth-grade teachers that they perceive to improve reading proficiency in Massachusetts elementary students. The purpose of this basic qualitative study was to describe the practices perceived by third- and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. Vygotsky's sociocultural theory framed the study because it helped to understand how learning develops. Semistructured interviews were used to gather the perceptions of eight teachers who volunteered to participate across Massachusetts where students were demonstrating reading proficiency. Themes were identified through thematic analysis using open and axial coding. The results showed that (a) teachers believe the culture and the environment of the school and classrooms are important contributors to reading success, (b) teachers report an institutional focus on collaboration and reflection, (c) teachers need a depth of understanding of curriculum and state standards, (d) assessment focuses on improving student learning, and (e) instruction must be purposeful and multifaceted. Findings may be used to improve reading instruction, increase reading proficiency, and promote academic success and career opportunities for elementary students in schools across the United States.

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Dedication

With heartfelt gratitude and thanks, I would like to dedicate this study to my friends and family for their endless support and encouragement. Specifically, I would like to thank my husband, David, who has always believed in me and encouraged me to go for it. You were always understanding when plans were put on hold for me to stay home and write. I cannot thank you enough for the encouragement you gave to make this accomplishment a reality, and I am grateful for your willingness to walk this journey with me. To my children, Grace and Caleb, thank you for your encouragement to keep going when things got tough and for always reminding me there is nothing I can't do.

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me and encouraged me to keep on keeping on. I am appreciative of the tough conversations that helped to refine my work.

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Chapter 1: Introduction to the Study

Learning to read can transform lives and become the gateway to learning. However, current reading performance outcomes in the United States have indicated that students have difficulty with basic reading skills (Hauser, 2020; Hroncich, 2022; Matheny et al., 2023; Moats, 2020; Schmid, 2018). According to the 2022 National Assessment of Educational Progress (NAEP) testing, 68% of fourth-grade public school students in the United States performed below the NAEP proficient level on the 2022 reading assessment, and 32% of fourth-grade public school students performed at or above the proficient level (National Center for Education Statistics [NCES], 2022). Based on this analysis of test scores, millions of students in the United States cannot read proficiently. The decline and stagnant growth of students' basic reading skills have established a significant cause for concern. Since 2005, Massachusetts schools have demonstrated a consistent pattern of excellence in reading proficiency, as demonstrated in state-mandated reading tests (NCES, 2022). Understanding Massachusetts elementary schools' patterns of practice could provide insight for other schools in their efforts to improve student reading proficiency. Research has continued to reflect practices and programs that show promise of improving student reading outcomes; however, there was little literature about the practices of teachers in Massachusetts elementary schools that may support growth in reading. The purpose of this basic qualitative study was to describe the practices perceived by third- and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students.

Chapter 1 of this study is organized into sections that begin with the background of reading and best practices. The problem statement, purpose of the study, and research question are presented, along with an overview of the conceptual framework that grounded this study. The nature of the study, definition of terms, assumptions, scope and delimitations, limitations, and significance follow. Chapter 1concludes with a summary and transition.

Background

Reading achievement has been a focus of much concern and research in the United States. After years of U.S. federal education reform policies, little has changed in its impact on improving student reading outcomes (Hanford, 2018, 2020; Hauser, 2020; Hroncich, 2022; Matheny et al., 2023; Paige et al., 2019; Rasinski & Young, 2017; Rasinski, 2017). The NAEP is a biannual, nationally representative measure of student achievement in select subjects among fourth-, eighth-, and 12th-grade students. According to the 2022 NAEP testing results for fourth-grade reading, 68% of fourth-grade public school students in the United States performed below the NAEP proficient level on the 2022 reading assessment, and 32% of fourth-grade public school students performed at or above the proficient level (NCES, 2022). Results were lower than the previous year and remained stagnant from other years. These data reflect that approximately 2 out of every 3 students in Grades K–12 within the United States displayed difficulty achieving reading proficiency and demonstrated ongoing concern about achieving foundational reading competencies (Hanford, 2018, 2020; Hauser, 2020;

Matheny et al., 2023; Rasinski & Young, 2017; Wexler, 2019). The decline and stagnant growth of students' basic reading skills have indicated a significant cause for concern.

Since 2005, Massachusetts has ranked first or performed significantly higher than the nationwide average (see Table 1). Massachusetts has a long history of support in advocating for the value of education and has led the way in achieving positive student outcomes. Much of their financial support was funded by taxpayers; however, in the late 1980s, Proposition 2½ was passed, which limited the imposed property tax (Driscoll, 2017). Then, in 1983, the *Nation at Risk* report was published, which identified how the education system failed to educate its students. The combination of Proposition 2½ and the *Nation at Risk* report led many in Massachusetts to rethink their education system. As a result, education improvement bills were drafted to increase school funding and raise education standards; however, they did not pass (Driscoll, 2017). In 1991, the founder of the Massachusetts Business Alliance for Education led an education reform effort to raise standards and provide the necessary support to improve the education and performance of all students in the Commonwealth of Massachusetts (Driscoll, 2017). The proposed reformation recognized the need to address Massachusetts's educational issues from "early childhood education to standards and curriculum, teacher evaluations, tenure, governance, school and district accountability, and school finance" (Driscoll, 2017, p. 87). In 1993, the Massachusetts Education Reform Act was passed, which provided 2 billion dollars over the next 7 years for education, with money appropriated to schools based on each community's ability to pay, committing more funding to those in need.

Table 1

Percentages of NAEP Testing Results for Fourth-Grade Reading

State	2017 proficient/advanced	2019 proficient/advanced	2022 proficient/advanced
Massachusetts (MA)	34/17	31/14	28/15
Nation	27/9	26/9	24/8
Combined total of proficient/advanced	51 (MA) 36 (nation)	45 (MA) 35 (nation)	43 (MA) 32 (nation)

Note. Percentage detail may not be summed to totals because of rounding.

The Massachusetts Education Reform Act addressed higher standards and expectations for students, educators, schools, and districts. Current educators were required to participate in professional development that combined pedagogy and content, including project-based proposals, using teachers' areas of expertise to train colleagues or developing a product related to their content to establish higher standards for teachers and set expectations to maintain their teaching licenses. Further, prospective teachers were required to pass a teacher licensing test to obtain their license (Driscoll, 2017). The Massachusetts Department of Education developed curriculum frameworks using input from classroom teachers and content and curriculum experts to address higher standards for students. Massachusetts created a state assessment, the Massachusetts Comprehensive Assessment System, which reflected NAEP standards and was used as a tool to improve instruction. The goal of the assessment committee was for teachers to provide good instruction based on clear standards rather than teaching to a standardized test.

Additionally, a local citizen and former teacher with an education software background had a software program developed to analyze Massachusetts Comprehensive Assessment System test scores with immediate results that would provide information to improve instruction based on areas of student need (Driscoll, 2017). Further, to hold

schools and districts accountable, adequate yearly progress (a target goal for annual student growth) was established according to the *No Child Left Behind Act*. Schools were evaluated based on the growth of their assessment scores; "the idea was not where you started but what kinds of gains you achieved" (Driscoll, 2017, p. 169). Massachusetts set higher standards for their adequate yearly progress goal and extended their date for smaller and easier gains to help students reach 100% proficiency (Driscoll, 2017). Massachusetts developed teacher, school, and district accountability systems that have been part of carrying out the Massachusetts Reform Act of 1993 to improve academic performance.

Another school and district accountability measure added was based on leadership. A principal leadership training program called the National Institute for School Leadership (NISL) was implemented. A comparison study led by Nunnery et al. (2011) was conducted throughout Massachusetts among schools led by NISL-trained principals and schools not led by NISL-trained principals. Results showed that principals trained in the NISL model had higher student achievement in math and English language arts than the comparison groups. Leadership used data to improve instruction, worked to provide a positive and collaborative environment for students and adults, and created a welcoming relationship with parents and community members (Driscoll, 2017; Nunnery et al., 2011).

Implementing the Massachusetts Education Reform Act of 1993 was an extensive, bottom-up, collaborative effort among classroom teachers, administrators, government officials, and community stakeholders committed to helping all

Massachusetts students achieve their fullest potential through quality education. The reform act effort was guided by resisting a simple solution and developing a comprehensive plan to improve what was not working. According to Driscoll (2017), "the challenge is rarely what to do; it is how to do it" (p. 172). Setting high standards for instruction is important, but implementing and enforcing them to promote student improvement was the mission of the Massachusetts Education Reform Act, which became a catalyst for education in the years to follow.

A growing body of literature also addressed the need to improve reading proficiency for students in K–12 education in the United States. Some researchers indicated the importance of improving a student's reading skills by the end of third grade for future academic success and economic outcomes (DellaVecchia, 2020, 2022; Education Advisory Board [EAB], 2019; Hanford, 2018; Morris et al., 2017). Research has shown positive outcomes for teachers and students when developing effective literacy instructional practices and pedagogical knowledge of reading development. Students with reading difficulties made more significant gains than their nonstruggling peers when taught using effective instruction by experienced and knowledgeable teachers (Amendum & Liebfreund, 2019; Didion et al., 2020). Teachers also reported positive outcomes related to their students and increased their pedagogical knowledge through professional development and support, improving their self-efficacy (Amendum & Liebfreund, 2019; Didion et al., 2020; Goodnight et al., 2020; Northrop, 2017). Goodnight et al. (2020) identified the continued risk of low reading performance among students, especially at-risk students from low socioeconomic backgrounds and non-English-speaking students.

Goodnight et al. argued that the quality of instructional practices is linked to the type of teacher support received. Northrop (2017) maintained that the gap between good and poor readers can be disrupted with high-quality instruction and intervention provided by experienced and knowledgeable teachers, demonstrating that schools and teachers can more efficiently work toward helping struggling readers overcome their early disadvantage. Schmid (2018) also addressed the importance of understanding the perspectives of other high-performing teachers to identify teacher beliefs and practices that influence student outcomes.

The findings identified the following beliefs and behaviors of the high-performing teachers at overall low-performing schools whose students performed well: Teachers believed all students could and would learn, teachers believed and engaged in professional learning, and teachers believed that appropriate instruction led to students' success. Additional behaviors identified were that teachers displayed a relentless tenacity to ensure student understanding and success and continued their professional learning (Schmid, 2018). Future research was also proposed to investigate how teachers believe they come about their beliefs about teaching and learning to understand teacher perspectives on additional dynamics that may influence reading progress (Schmid, 2018). Research has supported the growing need for teachers who can effectively deliver research-based reading interventions and the need for support and ongoing professional development.

Learning to read remains a difficulty for many students in the United States despite efforts at all levels, and finding ways to raise reading achievement continues to be

at the forefront of educational research. Researchers reported that despite knowledge of instructional practices that improve student reading outcomes, there is a lack of sufficient and appropriate research-based instruction that takes place within schools across the United States (Petscher et al., 2020; Rasinski et al., 2017; Seidenberg et al., 2020; Shanahan, 2020; P. C. Snow, 2021). Despite years of state and national initiatives, increased student reading mastery has yet to result (Hauser, 2020; Hroncich, 2022; Matheny et al., 2023; Rasinski, 2017). New ways of thinking must be explored if progress in reading is to be attained (duPlessis, 2019). In Chapter 2, a further review of the literature that supported the current study is provided, highlighting current research on reading and proposing best practices that have contributed to reading success.

Gap in Knowledge

The gap in knowledge in the field of reading addressed in this study was understanding the practices used by third- and fourth-grade teachers that they perceive to improve reading proficiency in Massachusetts elementary students. Insight into this research area could provide a better understanding of effective teaching methods that move from transactional solutions to transformational changes and improve student reading outcomes. The findings of this study could contribute to positive social change by providing teachers with an understanding of the practices Massachusetts teachers use with their students to foster positive reading outcomes. Understanding Massachusetts teachers' perceptions could provide strategies for improving student reading outcomes in schools where students are not demonstrating reading growth.

Need for the Current Study

Acquiring the skills to read is important for all other learning. However, based on standardized assessment scores, many students in the United States have continued to demonstrate a need for proficient reading skills. In Massachusetts, schools continue to demonstrate a pattern of excellence and consistently rank first in the nation in reading proficiency (NCES, 2022). Researchers have suggested that further research is needed to understand the perspectives of other high-performing teachers to identify teacher beliefs and practices that may influence student reading outcomes (Schmid, 2018). Because Massachusetts schools have demonstrated a consistent pattern of excellence in reading proficiency, understanding the patterns of practice teachers perceive to improve reading proficiencies could provide insight for other schools to improve student reading proficiency.

Problem Statement

The problem that was addressed through this study was a lack of knowledge regarding the practices used by third- and fourth-grade teachers that they perceive to improve reading proficiency in Massachusetts elementary students. Many researchers have investigated effective pedagogical practices of teachers for improving student outcomes. Schmid (2018) reported on the beliefs and behaviors of high-performing teachers at overall low-performing schools whose students performed well, which included (a) teachers believed all students could and would learn, (b) teachers believed and engaged in professional learning, and (c) teachers believed that appropriate instruction led to students' success. Additional behaviors identified were that teachers

displayed a relentless tenacity to ensure student understanding and success and continued their professional learning (Schmid, 2018).

Schmid (2018) identified the need for future research to investigate how teachers believe they come about their beliefs about teaching and learning, adding to the relevance of the current study in understanding teacher perceptions of the practices of Massachusetts high-performing schools that may contribute to students' reading progress. Northrop (2017) offered a context for moving struggling readers from a cumulative disadvantaged pathway (students who start school with low-level reading skills and progress more slowly than peers who begin school with higher level reading skills) to a compensatory pathway (students who begin with low-level reading skills and catch up to the same levels of achievement as their peers). Findings revealed that early disadvantage can be overcome. Schools can disrupt the cumulative disadvantage trajectory using high-quality instruction and high-quality intervention provided by experienced and knowledgeable teachers. Northrop demonstrated that schools and teachers can work more efficiently toward helping struggling readers overcome their early disadvantage and can help education stakeholders understand the potential impact of instruction and intervention on improving their students' reading outcomes.

Researchers have suggested that further studies are needed to understand the effective pedagogical practices that may contribute to students' reading growth (Brokamp et al., 2019; Jordan & Bratsch-Hines, 2020). Although researchers have identified some effective pedagogical practices for improving student reading outcomes, such as strong classroom management, positive teacher–student relationships, and the use of high-

quality interventions, there remains a lack of understanding about the problem of how to implement these practices to maintain teacher effectiveness in reading instruction that the investigation of Massachusetts schools may reveal. Despite documented research on best practices for teaching reading, proficiency for students remains a cause of concern. To improve student outcomes, educational reforms demand teachers change their cognition and action, resulting in adopting new approaches and abandoning old ones (Hanford, 2020; Ng & Leicht, 2019). Although researchers have shown a link between the quality of pedagogical practices and student reading outcomes, there was a lack of understanding of the practices within the context of teachers in Massachusetts elementary schools, where students were demonstrating growth in reading compared to other schools in the United States. The problem that was addressed through this study was a lack of knowledge regarding the practices used by third- and fourth-grade teachers that they perceive to improve reading proficiency in Massachusetts elementary students. This problem and the gap in the literature were addressed by describing teachers' practices in Massachusetts elementary schools where students were demonstrating growth in reading.

Purpose of the Study

The purpose of this basic qualitative study was to describe the practices perceived by third- and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. Understanding this phenomenon is important because basic reading skills are foundational to a student's academic success. Nationwide, basic reading skills have continued to decline or show stagnant growth, while Massachusetts scores have ranked higher than the national average in achieving positive reading proficiency

outcomes. This knowledge could help teachers and administrators think about ways to improve reading instruction.

Research Question

A basic qualitative design is a research approach to gain a deeper and more practical understanding of real-world issues to inform action (Patton, 2015; S. M. Ravitch & Carl, 2016). Research questions in basic qualitative studies are straightforward and open-ended, bringing focus to the study in understanding, explaining, and describing the phenomenon of the research study (Burkholder et al., 2016; S. M. Ravitch & Carl, 2016). Recognizing that low reading achievement scores have continued to be a problem in elementary schools across the United States, I attempted to provide an explicit understanding of the practices of elementary schools in Massachusetts, which demonstrated a consistent pattern of excellence in reading proficiency. I focused on one primary research question with the hope that the perceptions of Massachusetts elementary school teachers would add to the understanding of their patterns of practice to provide insight for other schools in their efforts to improve student reading proficiency. What do third- and fourth-grade teachers perceive as practices they use that contribute to improving the reading proficiency of Massachusetts elementary students?

Conceptual Framework

The conceptual framework that guided this study was based on Vygotsky's (1978) sociocultural theory. Reading is the foundation of academic success, yet teaching reading is a complex process that requires the support of skilled and knowledgeable teachers. Equipping teachers with the knowledge of how to use research-based instructional

strategies, proper assessment skills to make informative decisions, and an understanding of how students learn to read has been recognized by researchers as critical to improving their students' ability to learn how to read (Burkins & Yates, 2021; Castles et al., 2018; Chappuis et al., 2017; Kelly, 2018; Moats, 2020; Seidenberg et al., 2020; Shanahan, 2020). Further, supporting a student's environment is a critical component of learning (Vygotsky, 1978). A student's ability to learn is based on the teacher's intentionality of understanding the student's individual development to provide appropriate instruction (Polly et al., 2018; Vygotsky, 1978). Therefore, teachers need to know how their students develop as readers.

Vygotsky's (1978) sociocultural theory is best associated with understanding the collaborative process of learning how knowledge develops, the sociocultural influence on learning, and the learning environment through student–teacher and student–peer relationships. Vygotsky studied the relationship between learning and development and proposed the idea of the zone of proximal development (ZPD) to understand that relationship (Vygotsky, 1978; Zhou & Brown, 2017). A child's ZPD is the difference between what they know independently and what they can learn with support from a more knowledgeable person (Vygotsky, 1978). The idea of ZPD identifies the need for teachers to continually evaluate how students progress toward their learning outcomes and modify learning objectives as necessary (Tudge & Winterhoff, 1993). Using the sociocultural theory as a conceptual framework lens for my study in understanding how learning develops enhanced the understanding of high-performing schools' practices

related to student reading outcomes and may contribute to improving the development of teacher quality and reading education.

The logical connections between the framework presented and the nature of this study included implications for informed teaching and what teachers need to know to be effective in making informed decisions to provide appropriate reading instruction for their students. I recognized a person's individual development to be understood through interactions within the social context, as well as creating a new way of understanding and engaging in activity through ZPD. Those interactions include the role of the teacher–student relationship, social and cultural influences on learning, the power of language, and student-centered teaching (Tudge & Winterhoff, 1993). By assessing a student's individual ZPD, the teacher can identify what concepts a student has mastered and what concepts the student needs to develop to mastery. The role of the teacher is necessary for a student's individual development (Gredler, 2012; Nardo, 2021; Tudge & Winterhoff, 1993). Understanding the practices of Massachusetts third- and fourth-grade teachers where students were demonstrating growth in reading through the lens of Vygotsky's (1978) theory may provide a deeper understanding of the role of the teacher and their practices to develop a student's reading progress (see Nardo, 2021; Polly et al., 2018; Watson & Reigeluth, 2016). Further, Vygotsky's sociocultural theory may provide a basis for an additional description of how Massachusetts teachers perceive the collaborative process of learning how knowledge develops, the sociocultural influence on learning, and how the learning environment through student–teacher and student–peer relationships is developed. A more detailed explanation is provided in Chapter 2.

Nature of the Study

Qualitative research emphasizes the researcher as an active participant in engaging and recording the experiences of the study participants within their natural context (Patton, 2015; S. M. Ravitch & Carl, 2016). Through qualitative research, scholars seek an in-depth understanding of a phenomenon within its natural setting (S. M. Ravitch & Carl, 2016). To gather insight into an individual's lived experience, qualitative researchers derive meaning from the firsthand experience of the participants (S. M. Ravitch & Carl, 2016). A qualitative design was appropriate for the current study because the purpose was to describe the practices used by third- and fourth-grade teachers that they perceive to improve reading proficiency in Massachusetts elementary students. The qualitative design of this study was basic because of its appropriateness in investigating people's experiences related to their real-life context and focusing on understanding how they gain meaning from their experiences (see Merriam & Tisdell, 2016).

The basic qualitative design addresses what practical knowledge can be learned from the study (Patton, 2015). As noted by S. M. Ravitch and Carl (2016), the basic qualitative design would allow me to describe and make meaning of the complex phenomenon of the practices used by third- and fourth-grade teachers that they perceive to improve reading proficiency in Massachusetts elementary students. The basic qualitative design was chosen to provide a deeper understanding of Massachusetts elementary teachers' patterns of practice that could provide insight for other schools in their efforts to improve student reading proficiency (see Kahlke, 2018; Merriam & Tisdell, 2016).

Definitions

For this study, the following terms and definitions were used:

Comprehension: The ability of a reader to construct meaning from reading a given text through the interaction of conceptual and procedural knowledge (Snow, 2002).

Decoding: The process of translating print to speech by matching letters to sounds (Kershaw & Schatschneider, 2012).

Fluency: The ability to read with speed, accuracy, and expression (Hasbrouck & Tindal, 2017)

Massachusetts Comprehensive Assessment System (MCAS): A Massachusetts statewide standardized exam administered to all students in Grades 3–8 to measure students' ability based on the Massachusetts Curriculum Framework learning standards (Borofsky et al., 2013)

National Assessment of Education Progress (NAEP): A biannual, nationally representative measure of student achievement in select subjects among fourth-, eighth-, and 12th-grade students. The NAEP results are used to assess progress and inform and improve educational policy and practice in the United States (NCES, 2022).

Phonemic awareness: The ability to understand that words are composed of a series of individual sounds (Yopp, 1992)

Phonics: The relationship between letters and sounds (S. Vaughn & Linan-Thompson, 2004)

Assumptions

Two assumptions were made regarding this study. One assumption was that participants would answer the interview questions with honesty and transparency. To limit untrustworthiness in this study, participant confidentiality was preserved, and participants could withdraw from the study at any time with no ramifications. A second assumption was that the participants would base their responses on their teaching practice and experience and the student's reading growth under study. The basis for this assumption was that the state of Massachusetts assesses teacher performance on standards and indicators, including multiple measures of student learning, growth, and achievement; judgments based on observations and products of professional practice; and student feedback.

Scope and Delimitations

Massachusetts elementary schools have demonstrated consistent patterns of excellence in reading proficiency; therefore, the scope of this study focused on the practices used by third- and fourth-grade teachers that they perceived to improve reading proficiency in Massachusetts elementary students. This study was conducted in various elementary schools across Massachusetts; the state has 1,950 elementary schools. Braun and Clarke (2021) noted that determining sample size for data saturation related to research purposes should be based on a reflexive approach that is established on the breadth and focus of the research question; the method of data collection; the desired diversity of the sample; and the purpose, constraints, and goals of the study. To that end, Braun and Clarke (2021) recommended choosing a sample size range that would provide

adequate data for an in-depth story related to the specified phenomenon. I planned to include 20–25 teachers across five areas of Massachusetts where students were demonstrating growth in reading and selected participants based on purposeful sampling characteristics aligned with the objective of this study. Purposeful sampling is the preferred approach in a basic qualitative inquiry to gain information-rich data to answer the question under study (Patton, 2015). I continued interviewing until I reached saturation of ideas. I anticipated that my sample size would provide saturation for my study based on the number of teachers agreeing to participate.

I chose to do a purposeful sample because the potential number of cases within my area of study was more than could be studied within the time and resources available. Further, a purposeful sample adds credibility to a study by reducing bias or controversy about potential participant selection (S. M. Ravitch & Carl, 2016). The criteria for participant selection for the current study were teachers who (a) are current third or fourth-grade teachers who teach reading in the state of Massachusetts, (b) have taught reading for at least 1 year in the state of Massachusetts, and (c) teach at a school that is demonstrating growth in reading as reported by state reading assessments. This study was limited to third- and fourth-grade teachers from schools in Massachusetts where students were demonstrating growth in reading as reported by state reading assessments and did not include teachers with less than 1 year of experience teaching in Massachusetts. A participant group of all elementary teachers was considered; however, it was believed that rich, thick description would be obtained from a participant group of third- and fourth-grade teachers because achieving reading proficiency by the end of third grade

marks a shift in reading from learning to read to reading to learn (DellaVecchia, 2020, 2022; EAB, 2019; Hanford, 2018; Morris et al., 2017).

Qualitative research is typically not associated with findings generalized to the larger population because a qualitative study is based on a smaller focused group within a particular context. However, transferability allows the qualitative study to maintain its unique characteristics of context specificity while providing evidence that findings could be transferred to a broader context (S. M. Ravitch & Carl, 2016). By addressing transferability through accuracy and precision in describing how the research was conducted, researchers can provide descriptions of contextual factors will help readers understand the study (S. M. Ravitch & Carl, 2016). Although data from the current study were collected from elementary schools across the state of Massachusetts, transferability to other educational settings may be possible through the provision of a rich, thick description of the study setting, participants and their responses, and findings in the context of the environment of the study. Readers can determine whether the results relate to their respective contexts.

Limitations

Limitations in research are unavoidable variances within the design and method of the study (Burkholder et al., 2016). Limitations of the current study were my potential bias as the researcher, the availability of teachers for interviews, the sample size, my interpretation of the data, and the limited number of interviews. To address potential issues of bias, I audio-recorded the interviews to ensure that conversations were accurately recorded and had participants review their interview responses for accuracy

(see S. M. Ravitch & Carl, 2016). In qualitative research, reflexivity is central to addressing the researcher's positionality on the research process and its potential influence on the outcomes. Being reflexive requires the researcher to become self-aware of their positionality and subjectiveness grounded in an introspective reflection of their perspective as they engage with their research (Patton, 2015; S. M. Ravitch & Carl, 2016). To maintain fidelity and remain as authentic as possible to the participants' experiences, I engaged in critical reflection throughout the research process by keeping a personal journal to record my thoughts and feelings throughout the process and document the relationship I had with the data and analysis. To address the possibility of conflicts with the availability of teachers for interviews, I offered a variety of times and locations for interviews.

The sample size was based on 20–25 interviews with third- and fourth-grade teachers until data saturation was reached. There were also concerns about teachers providing honest answers based on apprehension of being reprimanded for the potential of not following school-mandated reading instruction protocol. This potential limitation was mitigated by ensuring the participants that there would be no identifying factors revealed in the study. Transferability outside of Massachusetts may be limited. However, the findings of this study may be transferable to other educational settings in other states because the reader may be able to make connections within their educational context. To lessen my personal bias as a potential limitation, I demonstrated trustworthiness by being transparent when I discussed my interpretations (see S. M. Ravitch & Carl, 2016).

Significance

The findings from this study may be significant because it filled a gap in understanding by focusing on how reading teachers at top-ranked schools implemented practices. Improving reading instruction has been the call of educators for decades, yet a crisis still exists (Burkins & Yates, 2021; Hanford, 2020; Paige et al., 2019; Rasinski, 2017). Reading is the gateway for all other learning, and those who struggle to read have difficulty maintaining academic skills and self-confidence. In pursuing research that addressed this problem of practice, I sought to better understand the practices that educators at Massachusetts elementary schools used to improve their students' reading proficiency and thereby help other schools to implement those practices to improve student self-confidence and provide an open door to limitless possibilities.

Insight into this research area could provide a better understanding of effective reading teaching methods that move from transactional solutions to transformational changes and improve student reading outcomes. The findings of this study could provide teachers and administrators with a model of valuable knowledge and effective skills for teachers to integrate and apply to their reading instruction. Doing so could contribute to positive social change by creating an opportunity for teachers to increase their pedagogical knowledge, improve their students' reading outcomes, and shape the course of education.

Summary

Developing teachers' pedagogical knowledge of reading development and research-based interventions has been shown to positively affect teachers and students

(Amendum & Liebfreund, 2019; Goodnight et al., 2020; Northrop, 2017; Schmid, 2018). Further, researchers have suggested that additional studies are needed to understand teacher perceptions of various dynamics that may influence reading progress (Schmid, 2018). The problem that was addressed in the current study was a lack of knowledge regarding the practices used by third- and fourth-grade teachers that they perceive to improve reading proficiency in Massachusetts elementary students. The purpose of this basic qualitative study was to describe the practices perceived by third- and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. The research question was aligned with the problem and purpose of the study and was designed to describe the practices perceived by third- and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. The findings of this study could fill a gap in understanding by focusing on the practices perceived by teachers at Massachusetts elementary schools to improve reading proficiencies. I aimed to provide teachers and administrators nationwide with a model of valuable knowledge for teachers to integrate into their reading instruction.

Chapter 2 provides a synthesis of the recent literature that established the current study's relevance. I also describe the literature search strategy, followed by a thorough description of the conceptual framework. Lastly, Chapter 2 includes an in-depth review of the literature on reading and best practices that contribute to reading success.

Chapter 2: Literature Review

The problem that was addressed in this study was a lack of knowledge regarding the practices used by third- and fourth-grade teachers that they perceive to improve reading proficiency in Massachusetts elementary students. The purpose of this basic qualitative study was to describe the practices perceived by third- and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. Identifying and describing teachers' perceptions of their practices may support the development of a standard of best practice for improving reading proficiency by providing teachers and administrators with a model of valuable information on how to improve their pedagogical knowledge of reading to integrate and apply to classroom reading instruction.

The decline and stalled progress in reading achievement is concerning. The reading proficiency problem in the United States has been well documented, and after years of U.S. federal education reform policies, little has changed in its impact on improving student reading outcomes (Amendum & Liebfreund, 2019; Hanford, 2018, 2020; Hauser, 2020; Matheny et al., 2023; Rasinski, 2017). Billions of dollars have been spent on improving reading proficiency, yet 2022 NAEP data revealed that two thirds of K–12th-grade students in the United States demonstrate difficulty in achieving reading proficiency, a significant cause for concern (NCES, 2022). All of the resources and initiatives have yet to lead to an acceptable outcome in reading proficiency performance (Hauser, 2020; Matheny et al., 2023; NCES, 2022; Paige et al., 2019; Rasinski & Young, 2017). A growing body of literature addressed improving reading proficiency for students

in K–12 education in the United States (NCES, 2022; Paige et al., 2019; Rasinski & Young, 2017). Leadership, pedagogical knowledge, the science of reading, and student-specific supports for all students were themes identified in the literature that may contribute to improved reading proficiency (Amendum & Liebfreund, 2019; Chew & Cerbin, 2021; Goodnight et al., 2020; Northrop, 2017; Schmid, 2018). The conversation must continue because achieving basic reading proficiency is foundational to all other learning.

Research has shown positive outcomes for teachers and students when developing effective literacy instructional practices and pedagogical knowledge of reading development. The instructional environment is important to driving reading success and developing good readers (Amendum & Liebfreund, 2019; Chew & Cerbin, 2021; P. C. Snow, 2021). Researchers maintained that the gap between good and poor readers could be disrupted by high-quality instruction and intervention provided by experienced and knowledgeable teachers, demonstrating that schools and teachers can more efficiently work toward helping struggling readers overcome their early disadvantage (Northrop, 2017). Researchers also suggested that further research is needed to understand the perceptions of other high-performing teachers to identify teacher beliefs and practices that influence student reading outcomes (Schmid, 2018). In the current qualitative study, I described the practices used by third- and fourth-grade teachers that they perceive to improve reading proficiency in Massachusetts elementary students.

Chapter 2 consists of the literature search strategy, conceptual framework, and the literature review related to key variables. The literature related to key variables is

organized into six sections. The first section highlights current research on reading and established research-based practices that contribute to reading success. The second section addresses the science of reading and its impact on reading outcomes. The third section presents the meaningful implementation of research in improving reading outcomes. The fourth section provides an overview of pedagogical knowledge research that suggests a link between the quality of a teacher's pedagogical knowledge and student reading outcomes (Ng & Leicht, 2019). Student-specific supports for all students comprise the fifth section and provide a synthesis of research that presents findings to substantiate that reading is an attainable task for most students through specific supports to address individual learning needs (Parsons et al., 2018). The final section elaborates on reading experts' responses to the lack of reading progress in the United States.

Literature Search Strategy

The literature reviewed for this study was obtained through electronic retrieval methods accessed through the Walden University Library and Google Scholar. Peer-reviewed journal articles that aligned with the research topic were gathered from the following databases APA PsycINFO, Complementary Index, Education Source, Gale Academic OneFile Select, ProQuest, PsycINFO, SAGE, Social Sciences Citation Index, Taylor & Francis, and Teacher Reference Center. The main journals I used were *Policy and Practice*, *Literacy Research and Instruction*, *Reading Research Quarterly*, *The Elementary School Journal*, *The Journal of Educational Research*, and *The Reading Teacher*. Keywords used in these searches included *literacy* and *standardized tests*, *elementary reading achievement* and *instructional strategies*, *elementary reading*

performance and *pedagogical practices/knowledge*, *elementary reading performance*, *Vygotsky's sociocultural theory*, and *zone of proximal development*. The literature reviewed for this study was based on alignment with the research topic and literature related to the study's conceptual framework.

Conceptual Framework

The conceptual framework that guided this study was Vygotsky's (1978) sociocultural theory. Learning theories have provided a framework for understanding the complex process of how students learn. Scholars have suggested considering a sociocultural perspective to understand the role of culture, interaction, and collaboration in quality learning (Allman, 2018; Polly et al., 2018). The key constructs of Vygotsky's theory include the critical role social interaction plays in the construction of knowledge, how language is part of the cognitive process, and the ZPD in learning (Aliyu & Yakubu, 2019; Allman, 2018; Polly et al., 2018). Further, sociocultural theory has maintained that learning is a process by which students acquire knowledge as they make sense of and integrate the information to create new knowledge with the direction and support of more knowledgeable others (Aliyu & Yakubu, 2019).

Vygotsky (1978) concluded that an individual's social origins influence higher level thinking skills, noting that "every function in the child's cultural development appears twice; first, between people (interpsychological), and then inside the child (intrapsychological)" (p. 57). Within sociocultural theory is the idea that the individual is not an isolated entity and there is a dynamic influence of social interaction and cross-cultural diversity in the development of learning (Polly et al., 2018). Regarding cognitive

development, Vygotsky described learning as a process independent of a child's development that fully manifests when interacting with others. Therefore, social learning facilitates development.

Further, Vygotsky (1978) explained that learning is dependent on the support of a student's environment. The Vygotskian view that learning drives development has significant implications for developing learning experiences. A student's learning experience should promote learning based on their individual development, including cross-cultural differences, to acquire higher levels of development (Allman, 2018; Polly et al., 2018). Venketsamy and Sibanda (2021) found that applying Vygotsky's sociocultural theory to teach English to English first additional language learners helped develop their literacy skills as peers learned from each other through social interaction in developing their literacy skills.

Vygotsky (1986) also established that language makes thought possible and is central to thinking. To Vygotsky, language is a tool that enables social interaction, directing behaviors and attitudes. Internalizing thinking becomes a form of language, which Vygotsky referred to as private speech. Vygotsky held that private speech enables individuals to direct and organize thought, an important part of any cognitive process and an important aspect of higher level thinking. Language is considered a part of an individual's cognitive being (Zhou & Brown, 2017). Vygotsky also maintained that language plays an integral role in learning by assigning meaning to facilitate communication and understanding.

Another important and extensively applied aspect of Vygotsky's perspective is the relationship between learning and development, including the ZPD. According to Vygotsky (1978), the ZPD is "the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers" (p. 86). ZPD is supported by the idea that instructional practices should be based on the process rather than the product and be more intentional in considering a student's individual development when making instructional decisions (Polly et al., 2018). Watson and Reigeluth (2016) argued that incorporating ideas such as ZPD with effective instructional practices could reform the current educational system in helping students develop a deeper understanding of instructional content by creating a differentiated, learner-centered environment. Nardo (2021) maintained that Vygotsky's theory of ZPD is often incorrectly interpreted as an educational tool or simplistic technique instead of recognizing its enriching pedagogical dimension and the role of the teacher in implementing it. Nardo argued that this interpretation simplified the learning process as experiences determined by the outside world and contended that Vygotsky's concept of ZPD is more than a method; it is cultivated from a pedagogical relationship.

Further, ZPD is associated with scaffolding; however, a deeper look into Vygotsky's work shows that this concept of education emphasizes individual development and human evolution (Nardo, 2021). Vygotsky (1978, as cited in Nardo, 2021) defined *evolution* as the combination of how people change, grow, and develop throughout life and the processes of learning that foster developmental gains. Vygotsky

(1978, as cited in Polly et al., 2018) viewed learning as social in that learning develops through another more knowledgeable person, including the collaborative interaction of peers or the pedagogical interaction of a teacher. Nardo (2021) argued that the role of the teacher is different from peer interaction in the quality of learning. Peers support the learning process, but teachers create the bridge from learning to development through their pedagogical expertise (Nardo, 2021). Also, Nardo posited that Vygotsky referred to development as relating to different learning qualities rather than learning evolving through peers or interacting with the world. Based on Vygotsky's interpretation, humans purposefully interact with their social environments rather than through natural necessity.

Further, Vygotsky (1978, as cited in Nardo, 2021) believed that the construction of knowledge and the development of higher mental functions are shaped by education practice, the pedagogical relationship with the teacher, and the teacher's pedagogical expertise. Vygotsky (1978) believed that relationships have a significant role in learning within a collaborative educational environment and that the teacher is the key player in the pedagogical relationship. The teacher's pedagogical knowledge is the fundamental attribute that provides instructional learning because an element of ZPD requires instruction for learning to occur (Nardo, 2021). Therefore, ZPD should not be considered an educational method but a purposeful practice because it requires a high level of pedagogical understanding of individual development and learning to facilitate effective teaching strategies (Nardo, 2021).

Building on Vygotsky's concept of ZPD, Danish et al. (2017) analyzed the range of performance between a student's response and the level of assistance they received.

Danish et al. found that looking through the lens of ZPD, teachers could guide their evaluation of a student's response through different forms of questioning to uncover new levels of development for the student. ZPD has supported the idea that learning is interactive and influential in characterizing how students learn complex concepts, and using the concept of ZPD can assist researchers and teachers in understanding those relationships (Danish et al., 2017). In the current study, applying Vygotsky's perspective of sociocultural theory and ZPD to reading instruction could provide a better understanding for teachers to reflect on how their current instructional practices align with their students' individual reading development to make better instructional decisions that support reading achievement.

The sociocultural conceptual framework supported this study by emphasizing the importance of establishing pedagogical practices to foster effective instruction that promotes deep and meaningful learning for all students (see Polly et al., 2018). Teachers must have confidence in their ability to evaluate their students' needs to move them to a place of deep learning (Rijk et al., 2017). According to Rijk et al. (2017), socially and culturally meaningful learning can occur within collaborative instruction with students and teachers when using sociocultural practices and involving the reader in the texts. Further, reading for meaning involves teacher content knowledge and understanding how to design and implement learning activities based on student needs in creating a learning environment that promotes reading for meaning (Rijk et al., 2017). Using the constructs of Vygotsky's (1978, as cited in Aliyu & Yakubu, 2019) sociocultural theory in reading can assist teachers in improving a student's reading ability by meeting students where

they are and challenging them to build skills through student-centered instruction (Aliyu & Yakubu, 2019). Teaching reading is a complex process that requires the guidance of knowledgeable teachers to lead students through it effectively. Therefore, teachers need to know how their students develop as readers. Applying Vygotsky's (1978, as cited in Aliyu & Yakubu, 2019) theory of sociocultural learning to reading has established its effectiveness in improving students' skills. Describing Massachusetts teachers' practices based on the sociocultural theory could provide insight into their patterns of practice in their efforts to improve student reading proficiency.

Literature Review Related to Key Concepts

The literature review is organized into six sections. The first section highlights recent reading research and establishes research-based practices contributing to reading success. The second section addresses the science of reading and its influence on reading outcomes. The third section presents the meaningful implementation of research in improving reading outcomes. The fourth section provides an overview of pedagogical knowledge research that suggests a link between the quality of a teacher's pedagogical knowledge and student reading outcomes (see Ng & Leicht, 2019). Student-specific supports for all students comprise the fifth section and provide a synthesis of research that presents findings to substantiate that reading is an attainable task for most students through specific supports to address individual learning needs (see Parsons et al., 2018). The final section elaborates on reading experts' responses to the lack of reading progress in the United States.

Current Research on Reading Practices

The debate of how to best teach reading has existed for decades, leaving educators unsure of what works in teaching students to read. Becoming a fluent and skillful reader is shown to be important to a student's academic success. Still, despite the recognition of developing reading proficiency, the decline and stagnant growth of students' basic reading skills have created a reading gap in practice and performance. Tunmer and Hoover (2019) held that the National Reading Panel (NRP) report presented a list of five recommended instructional components, phonemic awareness, phonics, fluency, vocabulary, and comprehension, but needed an understanding of how those components relate to the cognitive process of learning to read. Seidenberg et al. (2020) also argued that treating the five components of reading instruction independently of each other creates a problem and contended that is where the NRP report deviated from reading research. As posited by Petscher et al. (2020) and Seidenberg et al. (2020), reading is a developmental process dependent upon the five essential components of reading to help students gain fluency in identifying and understanding words and text. Compton-Lilly et al. (2020) argued that the media misguided and misinformed the public about the multidimensional nature of reading instruction to package and sell a solution mandated by government officials. Compton-Lilly et al. (2020) reviewed theoretical models of reading to gather information that might best support decisions related to reading instruction. Compton-Lilly et al. (2020) found that theoretical models of reading acknowledge the lack of incorporating multiple sources of skills into reading instruction, including cultural background, prior knowledge, decoding ability, comprehension,

strategies, and critical reading practices (Compton-Lilly et al., 2020). Knowing the major components of reading instruction is a good starting point. However, much is missing from the reading discussion by limiting it to a review of effective reading instructional components.

The Science of Reading

The science of reading comprises of an interdisciplinary body of scientifically based research that provides evidence on developing proficient reading and writing skills by understanding how reading develops and incorporating instructional practices for the various subskills of reading. The evidence supports that systematic and direct instruction in the following reading subskills (a) phonological awareness, (b) phonics and word recognition, (c) fluency, (d) vocabulary, and (e) comprehension and text are dependent on a student's reading development and linguistic background and instrumental in helping students develop reading proficiency (Burkins & Yates, 2021; Moats, 2020; Petscher et al., 2020; Shanahan, 2020; State Collaborative on Reforming Education [SCORE], 2020). The science of reading is not a new term; however, it has evolved as researchers have confirmed the major components of early reading development and incorporated research on instructional approaches that are evidence-based in reading instruction.

The science of reading perspective posited that scientific research has created a knowledge base to help schools make informed decisions regarding reading, reading development, and best practices for reading instruction based on student needs. Evidence has shown that reading is a language-based activity and does not develop naturally. Some researchers believe that misconceptions about the science of reading have kept educators

from using it to inform policy and practice (SCORE, 2020). Petscher et al. (2020) presented a comprehensive assessment of the science of reading by exploring the evidence on what constitutes the science of reading through an epistemological lens and evaluating the evidence to understand its potential to improve student reading outcomes for all students. Although understanding the development of the reading process and neurological function is important, Shanahan (2020) argued that it is necessary to consider the teacher's pedagogical practices to determine how best to teach reading. Seidenberg et al. (2020) suggested that if the science of reading is to be effectively implemented into educational practice, it should be collaborative with experts across other disciplines, develop an understanding of instructional practices based on students' development, avoid limiting the discussion to a phonics only approach, "invest in early learning" (Seidenberg et al., 2020, p. 9), ensure all student learners are represented, and evaluate current curriculum and practices against how students learn. Converging the science of reading into practice acknowledges the complexity of teaching and may improve the quality of reading instruction for all students.

Incorporating the science of reading into reading instruction has demonstrated success in student reading outcomes for many years. According to the EAB (2019) research, Grant County schools in West Virginia implemented a county-wide reading initiative by receiving professional development training from LETRS and coaching and modeling from national literacy consultants on the science of reading related to brain research and how students learn to read. Through their training and discussion of their current curriculum, school staff recognized the need to change their K-6th grade core

reading program because it did not include an explicit, systematic way of teaching reading (Lewis & Luma, 2021). Further, all school staff, administrators, teachers, and teacher assistants received training that district leaders believe led to the schoolwide improvement of student reading outcomes. Grant County school staff also recognized the importance of using data to drive instruction rather than just collecting it. Lewis and Luma (2021) stressed the importance of teachers understanding that data is not just about collecting it but also using data to enhance teaching. Using data to inform instruction is a continuous cycle of collecting and analyzing data results, such as tests and observations, and taking actionable steps for instructional practice to improve student learning (Chappuis et al., 2017). Tierney (2017) reiterated that using data is valuable to reading instruction because teachers can create fluid intervention groups and set goals to monitor student progress based on their areas of need. Teachers identify the student's problem, select an intervention to address the problem and decide how to monitor the intervention (Tierney, 2017). Using data is important to good teaching and has provided direction for teachers in identifying areas where students need additional support. By providing in-depth knowledge and training, Grant County school administrators provided teachers with the literacy knowledge to identify their students' needs and adjust their instruction to meet their students' needs. District leaders emphasized that it is not the program that makes learning to read possible; it is understanding the how and the why to implement those programs thoroughly (Lewis & Luma, 2021). Having knowledge in teaching reading is important to make instructional decisions based on student needs.

To synthesize the above research about what is known about the science of reading is that it is a body of evidence, based on research, on how to improve a student's reading proficiency outcomes through direct and systematic instruction of reading subskills including, (a) phonological awareness, (b) phonics and word recognition, (c) fluency, (d) vocabulary, and (e) comprehension and text (Moats, 2020; Petscher et al., 2020; Shanahan, 2020). Other main points can be summarized as incorporating the science of reading into the pedagogical practices of teachers (Lewis & Luma, 2021; Seidenberg et al., 2020), and instruction should be based on student needs (Chappuis et al., 2017; Seidenberg et al., 2020). One controversial issue identified is noting that reading is based on the development of reading subskills (EAB, 2019; Moats, 2020; Petscher et al., 2020; Shanahan, 2020). What remains to be known about the Science of Reading is how schools have evaluated their current reading curriculum and instruction against how students learn to read and how they have incorporated it into practice.

Structured Literacy

Structured literacy is not a specific program and should not be considered a quick, easy cure for all children's literacy problems. Structured literacy is a systematic and explicit approach to teaching reading. Systematic is sequential instruction that is built on prerequisite skills. Explicit refers to a clear explanation and demonstration of the skill being taught. Structured literacy is characterized by structured lessons that incorporate listening, speaking, reading, writing, and the structure of language to support a student's literacy development.

Further, teachers regularly monitor and assess student progress to identify and differentiate instruction based on current student needs (International Dyslexia Association [IDA], 2019; Lorimor-Easley & Reed, 2019). Opponents of structured literacy contend that a structured literacy approach to reading has been misrepresented and overstated in its research findings, reducing the approach to lessons of sequential phonetic decoding skills, and ignoring reading fundamentals, including using visual cues to help students read words and construct meaning (Compton-Lilly et al., 2020). Views differ on how teachers can improve their students' reading development; however, structured literacy is a current approach that has demonstrated promising outcomes for reading instruction.

Addressing the reading needs of all students by providing targeted instruction can support a student's reading development. Bayless et al. (2018) examined the effects of structured literacy instruction and reading intervention on the reading skills of 543 kindergarten through third-grade students enrolled in a community-based after-school program in four public housing neighborhoods in Denver, Colorado. Two groups were used to compare findings. The treatment group comprised of 389 kindergarteners through third-grade students who were first-time participants in the after-school program. The comparison group included 154 kindergarteners through third-grade students from the public housing community who were not enrolled in the after-school program. The treatment group participants received three types of approaches to reading instruction: structured literacy instruction, *Read Well*, for 30-minute sessions four times per week, individual tutoring at least one time per week for 45 minutes, and a choice-based book

distribution program, *GR8 Readers*, culturally appropriate books selected by students to use during tutoring and later build a home library by taking them home. The intervention group also participated in social-emotional and technology-based learning. Students were assessed using the *Developmental Reading Assessment, 2nd Edition (DRA-2)*, which evaluates reading performance based on word analysis, oral fluency, and comprehension. Findings from the total sample of the Bayless et al. (2018) study revealed that students who participated in the structured literacy program, tutoring, and student choice books were more likely to demonstrate reading proficiency over time than comparison students. The comparison group showed a decline in reading proficiency over time. The matched sample of students showed similar growth results among the intervention group; however, the comparison-matched sample group showed no change. Though there are slight differences between the total and matched samples, both results suggested that students in the after-school program improved their reading proficiency faster than those in the comparison group. The study's findings proved that implementing targeted literacy instruction through a structured literacy program, tutoring, and take-home books can improve high-risk students' reading proficiency.

Meeting the differentiated needs of students at risk for reading failure can be challenging during the school day. However, supplemental tutoring can provide individual instruction and practice opportunities that research supports are needed to improve reading outcomes for at-risk students. Lindo et al. (2018) examined the effectiveness of a highly structured reading intervention program for 34 struggling kindergarten through sixth-grade readers of a large urban city in the southwest. Students

were randomly selected based on their grade level benchmark outcomes. Tutors were non-education majors, minimally trained but supervised by reading professionals. Students were assessed before receiving the intervention and after using the *Dynamic Indicators of Basic Early Literacy Sills (DIBELS)*, which measured phoneme segmentation fluency, nonsense word fluency, and oral reading fluency. *The Woodcock Language Proficiency Battery – Revised (WLPB-R)* was also administered before and after intervention and measured letter-word identification, word attack, and passage comprehension. Tutors received four one-hour training sessions, including intervention modeling, practice, and feedback.

Further, professors modeled the correct pronunciation of sounds and how to blend sounds to read words. Tutoring sessions were held twice a week using a structured literacy program called *Bookshop Phonics*, which incorporated phonics instruction, book reading at students' instructional level, and supplemental learning games. Comprehension instruction included book reading routines based on readability and interest levels, incorporating making predictions, reading and re-reading a few pages to build fluency and comprehension, and summarizing. Tutors also created an environment where students were motivated to do their best and offered incentives for effort and participation. Lindo et al. (2018) found that the minimally trained, non-education tutors effectively implemented the structured literacy program. Results were statistically significant in support of the treatment group, with effect sizes of 0.99 in letter-word identification, 1.02 in word attack skills, and 0.78 in passage comprehension.

Further, guidance and support from reading professionals were readily available for the tutors. Additional findings showed statistical significance in the tutored students' word identification, word attack, and comprehension outcomes, indicating that tutoring focused on structured literacy can improve reading skills and provide educationally meaningful outcomes in reading ability. Further assessment measures, including *DIBELS*, also confirmed students' reading development growth. Tutoring, supervised by professionals with reading expertise, demonstrated the potential for positive academic benefits for low-achieving and at-risk students.

To synthesize the above research about what is known about structured literacy, structured literacy is a systematic and explicit approach to teaching reading (IDA, 2019; Lorimor-Easley & Reed, 2019). Other main points can be summarized by noting that it is not a specific program (IDA, 2019; Lorimor-Easley & Reed, 2019), and instruction supports a student's literacy development (IDA, 2019; Lorimor-Easley & Reed, 2019). One controversial issue is that a structured literacy approach connects students with authentic texts; some view that as ignoring reading fundamentals (Compton-Lilly et al., 2020). Structured literacy aims to create enthusiastic and proficient readers by helping students effectively apply their decoding strategies to good, quality literature (Bayless et al., 2018; Lindo et al. (2018). What remains to be known about structured literacy is how schools monitor and assess student progress to identify and differentiate instruction based on current student needs.

The Reading Brain

New information has indicated that researchers can recognize what parts of the brain are responsible for learning how to read. To address the need to improve students' reading outcomes, scientists found that there are regions of the brain that are key in understanding how learning to read is acquired and recommend developing the following brain regions associated with learning to read (a) the visual cortex, recognizes printed letters and words, (b) the auditory cortex, processes sound and builds oral word understanding, (c) the angular gyrus, associates letters with sounds, and (d) the inferior frontal gyrus, produces speech and processes meaning (Burns, 2017; Chyl et al., 2021; Compton-Lilly et al., 2020; EAB, 2019; Edwards, 2016). Researchers within the disciplines of neuroscience, linguistics, medicine, and child psychology established that it is important to understand the brain's role in acquiring reading skills to inform policy and practice in providing effective reading instruction (Burns, 2017; Chyl et al., 2021; Ehri, 2020; Patael et al., 2018; Petscher et al., 2020; Seidenberg et al., 2020). The reading process begins when the brain receives visual input in the visual cortex area, where the information is interpreted. However, a connection with the auditory cortex is required to understand the speech sounds and their meanings. As reading skills develop, words are recognized by sight in the visual cortex area, thus improving reading fluency. The angular gyrus connects the visual and auditory cortex areas to interpret written text and execute the act of reading. The inferior frontal gyrus processes speech and language to construct meaning (Academy in Manayunk [AIM], 2022; Burns, 2017; Chyl et al., 2021; Compton-Lilly et al., 2020; EAB, 2019; Edwards, 2016). Current developments in

neuroscience and technology have also allowed researchers to understand the key areas of the brain used in reading and the why in how readers read, both strong and struggling. Compton-Lilly et al. (2020) supported the idea that neuroscience has identified regions of the brain that support reading. Semantic processing is the ability of a reader to access stored information. Semantic systems cover most of the cerebral cortex and comprise semantic and syntactic processes. Semantic representations and orthographic symbols overlap for the reader to comprehend the text during the reading process. Another area of the brain critical in the reading process is the prefrontal cortex associated with overlap in memory and cognitive control. Additional neuroscience reading research has revealed how reading activates many areas of the brain (Compton-Lilly et al., 2020). The brain regions responsible for learning to read exist when we are born; however, they must be developed to engage in reading (EAB, 2019; Sedita, 2020). Although no single region of the brain is associated with reading, using each area of the brain to teach foundational reading skills through direct instruction supports the complexity of learning to read.

The function of the brain in reading tasks has been studied; however, there is limited knowledge of its involvement in reading acquisition. Li et al. (2021) examined the cerebellum's role in reading acquisition by studying 80 five to six-year-old kindergarteners with typical intelligence who were beginning to learn to read. The participants were instructed to perform a reading-related task that measured decoding ability, orthographic processing, phonological manipulation, receptive vocabulary level, and oral language ability during a functional magnetic resonance image (fMRI) of the brain. After one year of formal reading instruction, Li et al. (2021) tested the reading

ability of the participants to identify the regions in the cerebellum associated with early reading by comparing the results of a new fMRI to the first fMRI. This study's findings proposed that the cerebellum's left and right hemispheres were involved differently in reading acquisition associated with mental effort and reading-related processes. Mental effort was associated with the left cerebellar lobe, and reading-related processes such as phonological processing were associated with the right cerebellar lobe. A third comparison was completed using the same students' first and second data sets to identify any correlation to predict future reading ability. Based on their longitudinal design, Li et al. (2021) reported that the right hemisphere is associated with reading-related processing that could predict future reading ability. Based on the comparison of both fMRI results, data of the first fMRI showed right cerebellar lobule VII activity extending to lobule VIII, demonstrating a correlation between current reading ability and the second fMRI, which related to future reading ability. Understanding the cerebellum's role in early reading acquisition can assist in identifying the cognitive process important to learning how to read.

In a longitudinal study, Borchers et al. (2019) studied brain images using diffusion magnetic resonance imaging (dMRI) to measure white matter pathways, bundles of nerve fibers that connect different parts of the cerebrum allowing information to travel from one part of the brain, to the other. Borchers et al. (2019) examined the cerebral and cerebellar white matter pathways of 37 typically developing children from the San Francisco Bay area at the onset of learning to read at the age of 6 years to determine if there would be an association with later reading abilities. After controlling

for demographic covariates, sex, and family history of reading delays, the pattern of results suggested that the fractional anisotropy (FA), the left arcuate, the left and right superior longitudinal fasciculus (SLF), and the left inferior cerebellar peduncle (ICP) had significant contributions to reading outcomes associated with core language scores and phonological awareness. Six-year-olds' core language scores and phonological awareness were considered predictor variables because of their high correlation with oral reading index (ORI) scores administered at the age of eight. Further, the Borchers et al. (2019) study indicated that variation in reading abilities at age eight can be identified by FA values in early reading development and explained by other reading-related skills, including executive function and oculomotor control. These findings revealed that the neurobiology of a child's brain from the onset of reading was associated with their later reading development, indicating that cerebellar white matter pathways are important in learning how to read (Borchers et al., 2019). Understanding how learning to read is acquired can advance educators' knowledge to develop and improve instruction based on a student's development.

Although the field of neuroscience has provided research on how children learn how to read and the best ways to teach reading, this research has yet to be implemented into educational policy and practice. Chyl et al. (2021) focused their review of longitudinal studies of literacy development on identifying neural changes associated with reading development among typical and atypical reading development. Researchers based the studies on the understanding that literacy development is a process and should be studied multiple times. This type of study could also lead to identifying early markers

of dyslexia. The findings of Chyl et al.'s (2021) review proposed that current knowledge of reading development is not dependent on a student's age or reading experience. In typical reading development, evidence showed structural maturation and increased structural connectivity of the left language areas, whereas, in atypical reading development, there was evidence of differences in white matter structural connectivity.

To synthesize the above research about what is known about the reading brain is that researchers have identified the regions of the brain associated with learning to read (Burns, 2017; Chyl et al., 2021; Compton-Lilly et al., 2020; EAB, 2019; Edwards, 2016). Other main points can be summarized by noting that researchers have a better understanding of how strong readers read and why struggling readers struggle (Burns, 2017; Chyl et al., 2021; Ehri, 2020; Patael et al., 2018; Petscher et al., 2020; Seidenberg et al., 2020). One controversial issue is the idea that reading is not a natural process (Burns, 2017; Chyl et al., 2021; Ehri, 2020; Patael et al., 2018; Petscher et al., 2020; Seidenberg et al., 2020), but is complex and, as these researchers claim, requires direct, systematic, and explicit instruction. What remains to be known are teachers' perceptions of how the reading brain research is being implemented into educational policy and practice.

The Simple View of Reading

Although there is considerable research on the importance of phonics instruction, it is only one component of reading development that impacts comprehension. The goal of reading is to understand what is read by extracting and constructing meaning from the text. Reading comprehension skills increased when decoding was fluent and automatic

(Apel, 2022; Catts, 2018; Lonigan et al., 2018; Morris et al., 2017). Gough and Tunmer's (1986) simple view of reading (SVR) proposed that reading comprehension is the product of two processes: word recognition and language comprehension. Comprehension is compromised if either factor is deficient (Chiu, 2018). Some have argued that Gough and Tunmer's (1986) view of reading is labeled as too simplistic. However, further investigation into the SVR model acknowledged that reading is a complex process of decoding—units of speech in text— and listening comprehension—extracting and constructing meaning from language based on vocabulary, morphology, knowledge, syntax, and higher level language skills (Compton-Lilly et al., 2020). The SVR does not refute that reading is a complex process but has defined it as a straightforward way to explain how reading comprehension evolves to develop student profiles to instruct students appropriately.

A lack of decoding skills has been shown to impact a student's later reading ability. Researchers found that third and fourth-grade students who scored proficient or advanced in reading declined in reading proficiency when they reached fifth grade (EAB, 2019; Morris et al., 2017; Tennessee Department of Education, 2016). The argument was that these students were not taught to decode unfamiliar words but to guess based on pictures and context clues. Their findings suggested that a lack of decoding skills in the upper elementary grades must be addressed for significant improvement in reading (EAB, 2019; Morris et al., 2017; Tennessee Department of Education, 2016). Providing continual instruction in high levels of text difficulty without addressing the prerequisite decoding skills for upper elementary students and beyond only manifested the problem of

poor reading skills (Lonigan et al., 2018; Morris et al., 2017). It is important for teachers to understand their students' reading abilities and provide the appropriate instruction based on areas of need and requisite skills for them to read proficiently.

Research has shown that to acquire strong reading comprehension skills, a reader must have sufficient decoding and language comprehension skills (Lonigan et al., 2018; Patael et al., 2018). Lonigan et al. (2018) studied 757 third through fifth-grade students from 18 schools in North Florida across all socioeconomic indicators to determine if decoding and language comprehension factors, aspects of the SVR framework, were a significant predictor of a student's reading comprehension skills. The study's findings were measured on standardized reading and language assessments, including word decoding, reading comprehension, receptive and expressive vocabulary, depth of vocabulary, receptive and expressive syntax, and listening comprehension. The study's findings proposed that among all third through fifth-grade students, and across all skill levels of reading comprehension, there was a high variance, 85% to 100%, in reading comprehension explained by decoding and language comprehension variables of vocabulary and listening comprehension. Further, evidence supported that the comparative impact of decoding and language comprehension on reading comprehension changed across grades. Decoding skills were a stronger predictor of reading comprehension skills for younger students than older students. Lastly, findings indicated that the influence of vocabulary skills on reading comprehension depended on the reading comprehension level exhibited by the reader. Lonigan et al. (2018) concluded that decoding and language comprehension skills are necessary to improve a student's reading

comprehension ability. This outcome suggests the potential need for differentiated instruction based on a student's ability.

Other researchers have developed reading profiles of students who scored low on their end-of-the-year reading assessments that measured phoneme segmentation, word recognition, fluency, receptive vocabulary, and comprehension. The findings from these studies suggested that these students differed in their ability to perform basic reading-related dimensions of word recognition, fluency, vocabulary, and comprehension (Morris et al., 2017). Building on the work of previous researchers, Morris et al. (2017) examined the print-processing and vocabulary differences among fifth and sixth-grade students who performed poorly on standardized reading assessments. Morris et al. (2017) identified four reader profiles among their participants: (a) high print processing/low vocabulary, (b) high print processing/high vocabulary, (c) low print processing/high vocabulary, and (d) low print processing/low vocabulary. Part of the findings revealed that 62% of the students could not accurately or fluently read grade-level text, demonstrating that a lack of foundational reading skills impacted a student's reading comprehension in later grades.

Further, Morris et al. (2017) concluded that a limited knowledge of phonics skills can impede a student's reading growth in later grades. Morris et al. (2017) also found that though the SVR describes reading comprehension as the product of print-processing and language comprehension, results of the study showed that if students demonstrated skills in one of those areas, print-processing or language comprehension, students were able to do relatively well in reading comprehension. Morris et al. (2017) suggested this was due to the strength of one area compensating for the weaker area. However, Morris et al.

(2017) found that if both areas were low, students achieved lower scores on the reading comprehension assessment.

To synthesize the above research about what is known on the SVR is that becoming a proficient reader involves both decoding and language comprehension to promote reading comprehension (Apel, 2022; Catts, 2018; Gough & Tunmer, 1986; Lonigan et al., 2018; Morris et al., 2017). Other main points can be summarized by noting that students need to be skilled in both decoding and language comprehension, or a breakdown in comprehension will be the result (Chiu, 2018), and the SVR is a straightforward way to explain how reading comprehension develops (Chiu, 2018; Compton-Lilly et al., 2020). One controversial issue was that the SVR is not a model describing how decoding and language comprehension skills develop (Catts, 2018). What remains to be known is how teachers used the SVR to create student profiles to provide appropriate instruction.

Scarborough's Reading Rope

Learning to read is a complex and individual process. To address the complex and individual task of reading, Dr. Hollis Scarborough, psychologist and literacy expert, expanded the SVR by creating a visual representation of the wide range of skills necessary to become a proficient reader, referred to as Scarborough's Reading Rope (2001). The important interactive skills needed for skilled reading are layered within language comprehension and word recognition. Scarborough posited that the language comprehension layer is comprised of (a) background knowledge—knowledge one has on a topic, (b) vocabulary knowledge—meaning of words, (c) language structures—sentence

level comprehension, (d) verbal reasoning—understanding figurative and literal language, and (e) literacy knowledge—elements of literacy concepts. The word recognition layers include (a) phonological awareness—speech sounds of language, (b) decoding—sounds are represented by letters, and (c) sight recognition—instantly processed. As each skill becomes automatic, a student's ability to process information is made available to focus on comprehending what is being read and strengthening fluency (AIM, 2022; David et al., 2020; Sedita, 2020). Scarborough's Reading Rope presented information on how to provide effective instruction for students who struggle with reading proficiency (AIM, 2022). Scarborough's Rope provided insight into the intricacies required in developing skilled reading. It is important for teachers to understand the intricacies and interdependent relationship of skilled reading to help them determine how to provide the most effective reading instruction for their students to become proficient readers.

Walsh (2020) examined the relationship between oral language and reading comprehension skills after accounting for variance due to decoding and listening comprehension. Fifty-five students participated. Students were in first grade when the study began and transitioned to second grade at the study's end. Students' decoding, reading comprehension skills, and oral language measures—listening comprehension, morphological awareness, syntactic awareness, and vocabulary, were measured using standardized assessments to identify the contribution of oral language components to reading comprehension. The study found that decoding and listening comprehension accounted for 55% of the variance in the first-grade students' reading comprehension

scores (Walsh, 2020), demonstrating the importance of decoding. However, further study results showed a significant increase in variance in the oral language measures of morphological awareness, syntactic awareness, and vocabulary on reading comprehension beyond decoding and listening comprehension skills. Walsh (2020) concluded that their findings of Scarborough's Reading Rope Model (2001) supported the intricacies of both decoding and language comprehension skills in developing reading comprehension by helping educators understand why students struggle with comprehension and target the skills they are lacking. Research supported the positive implications of incorporating oral language skill instruction when teaching students how to read.

Kurit (2022) compared reading aloud versus reading silently among four first and second-grade students to understand how they comprehended the written text. All participants had a diagnosed speech sound disorder, and one student was also diagnosed with a learning disability. Participants were administered the *Gates-MacGinitie Reading Tests* to gather baseline data and for comparative purposes. Randomly selected reading passages, equivalent in difficulty, level of interest, and diversity of words, were distributed to each student. The silent reading assessment results indicated that all participants scored perfectly; however, the participants' scores were lower when instructed to read aloud. The participant with the diagnosed learning disability scored significantly lower than the other participants. Using Scarborough's Reading Rope model, Kurit (2022) inferred that when reading aloud, the participants' reading comprehension affected their language comprehension, specifically their speech sound

disorder, which impacted their overall ability to understand what they read. Kurit's study demonstrated the impact of language deficits on reading comprehension, as represented in Scarborough's Reading Rope.

To synthesize the above research about what is known about Scarborough's Reading Rope is that it is a visual depiction for understanding the underlying skills involved in the complexity of the learning-to-read process (AIM, 2022; David et al., 2020; Kurit, 2022; Sedita, 2020; Walsh, 2020). Other main points can be summarized by noting that a weakness in one area of the rope can impact a student's overall reading comprehension (AIM, 2022; David et al., 2020; Sedita, 2020), and as each skill becomes strategic and automatic, a student's reading fluency and comprehension improves. One controversial issue was addressing the skills needed for teaching reading in isolation rather than considering them as interactive and independent of each other (AIM, 2022; David et al., 2020; Sedita, 2020). What remains to be known about Scarborough's Reading Rope is how educators used the reading rope to identify and target instruction to meet students' needs.

Meaningful Implementation of Research

Schools across the nation have given a great deal of effort to close the reading gap; however, apart from the time and resources invested into initiatives for improving students' reading skills, there has been slight improvement (Amendum & Liebfreund, 2019; EAB, 2019; Hauser, 2020; Hroncich, 2022; Matheny et al., 2023; Paige et al., 2019; Rasinski & Young, 2017). The urgency to improve a student's reading ability has led to an onslaught of arguments over what program should be used; however, no single

effective strategy will allow all students to become proficient readers (EAB, 2019; Kelly, 2018; Seidenberg, 2018). Instead, the reading wars rage on while a gap in reading proficiency has continued to plague students (Castles et al., 2018). Many researchers have agreed that it is time to end the reading wars and use the abundant research on how students learn to read to provide a variety of ways to address the problem of low reading proficiency based on student needs.

Much research exists on effective reading instructional practices to teach students how to read, including phonemic awareness, phonics, fluency, vocabulary, and comprehension. Tunmer and Hoover (2019) and Seidenberg et al. (2020) agreed that the NRP recommendations created a framework from where to begin; however, they argued that learning to read is more than a set of lessons to achieve. It is an active process of decoding words, leading to comprehension (Ehri, 2020; Lonigan et al., 2018; Patael et al., 2018). Further, despite there being more than one way to teach reading to improve reading outcomes when effective execution of reading instructional practices is implemented, understanding a student's reading needs is an integral part of the learning how to read equation (Chiu, 2018; Kelly, 2018; Lonigan et al., 2018; Morris et al., 2017; Seidenberg, 2018). Reading instructional practices must be used meaningfully with a knowledge of the cognitive process of learning to read to enhance comprehension (EAB, 2019; Lonigan et al., 2018; Morris et al., 2017; Tennessee Department of Education, 2016). Although addressing the reading gap is a continuous discussion, its effectiveness is questioned based on persistent poor reading outcomes. Because research exists on the

various ways students may learn to read; many argue that it is time to put this knowledge into action.

Research has supported that the science of reading perspective understands the process of learning how to read, including how different parts of the brain work together to process written language. Studies of the science of reading revealed brain regions that are activated when learning how to read (Burns, 2017; Chyl et al., 2021; EAB, 2019; Edwards, 2016; Ehri, 2020; Patael et al., 2018). Researchers argued that lasting change in reading education would only result when educators align their reading instruction with the science of reading, understand how reading develops, and use that knowledge to guide instructional decisions (Petscher et al., 2020; Seidenberg et al., 2020; Shanahan, 2020; P. C. Snow, 2021). Implementing the science of reading will require teacher training at all levels, including preservice level and professional training for current teachers (EAB, 2019; Petscher et al., 2020; P. C. Snow, 2021). Studies of schools using reading systems aligned with the science of reading have demonstrated significant growth in reading outcomes, including at-risk student populations (EAB, 2019; Ehri, 2020; Seidenberg et al., 2020). All students deserve schools that use evidence-based systems of support and have access to highly effective teachers who are sufficiently prepared to teach them how to read (EAB, 2019; Seidenberg et al., 2020). There is sufficient research to end the reading debate and provide a deep understanding of how students best learn how to read.

To synthesize the above research about what is known on the topic of meaningful implementation of research is that schools have made a valiant attempt to close the

reading gap, spending enormous amounts of time and money to invest in improving their students' reading outcomes (Amendum & Liebfreund, 2019; EAB, 2019; Hauser, 2020; Hroncich, 2022; Matheny et al., 2023; Paige et al., 2019; Rasinski & Young, 2017). Other main points can be summarized as noting that little improvements have been made or have remained stagnant despite the abundant research on knowing how students learn to read (Castles et al., 2018; EAB, 2019; Kelly, 2018; Seidenberg, 2018) and that implementing meaningful reading instructional practices has been shown to improve reading outcomes (Chiu, 2018; Kelly, 2018; Lonigan et al., 2018; Morris et al., 2017; Seidenberg, 2018). One controversial issue was putting into action the knowledge of how students learn to read and recognizing that learning to read is more than a set of lessons to achieve (EAB, 2019; Ehri, 2020; Lonigan et al., 2018; Patael et al., 2018; Petscher et al., 2020; Seidenberg et al., 2020; Shanahan, 2020; P. C. Snow, 2021). What remains to be known about meaningful implementation of research is how educators align their reading instruction with the science of reading, understand how reading develops, and use that knowledge to guide their instructional decisions.

Pedagogical Knowledge

Despite an emphasis on producing knowledgeable and skilled teachers to improve student reading outcomes, reading scores have remained stagnant. Decades of research have been conducted to understand how children learn to read to improve reading achievement, especially for at-risk students (Moats, 2020). Moats is an advocate for improving teacher education and teaching children how to read, including those who struggle. In a report published by the American Federation of Teachers (AFT) in

collaboration with the Center for Development and Learning, Moats updated her original report, *Teaching Reading is Rocket Science*, by providing deeper insight into the science of reading and calling for educators to act. The AFT is the second-largest teachers' union in the United States. Their mission is to promote fairness and equality through high-quality education, healthcare, and public services. Founded in 1992, The Center for Development and Learning is a nonprofit Louisiana-based organization focusing on closing the achievement gap through teacher effectiveness. Current research has provided solid findings on how students develop reading skills and how to use research-based practices to overcome reading difficulty. However, much of this research has not found its way into teacher education programs or professional development for practicing teachers (Didion et al., 2020; Moats, 2020). Proficient reading has been shown to be dependent on teachers who have extensive knowledge of the structure of language to be effective in helping students understand the relationship of sounds to words, spellings, and meanings (Moats, 2020).

Researchers have argued that current reading instruction is not taught by teachers with pedagogical knowledge of how students learn and develop, which can lead to increased difficulty in learning how to read. Approximately 80% of elementary teachers fail to provide adequate instruction in foundational word-decoding skills or do not teach it (EAB, 2019). The National Council on Teacher Quality (NCTQ) reviewed teacher preparation programs for early reading instruction coursework (2020b). The NCTQ, founded in 2000, is the only nonprofit, nonpartisan organization focused on improving teacher effectiveness by imparting pedagogical knowledge and skills to new

teachers based on research-driven practices. According to the NCTQ, they advocate for improving teacher preparation**,** diversity, and pay. The mission of the NCTQ is to produce the highest number of successful readers and to strengthen policy and practice to produce and support high-quality teachers (NCTQ, 2020a). To determine the quality of teacher preparation programs for the 2020 report, the NCTQ evaluated 1,047 required reading course programs and 725 course textbooks in addition to the course syllabi of elementary programs throughout the United States. Evaluators, experts with advanced degrees and deep knowledge of how children learn to read, looked for clear evidence of explicit and repeated instruction of each of the five essential components of reading instruction, along with high-quality textbooks to support instruction and opportunities for practice. After identifying the required reading courses, the syllabus offered additional information to determine if the coursework provided sufficient instructional time for each reading component through lectures, assignments, fieldwork, and measures to assess teacher knowledge. Textbooks were read thoroughly to ensure that teachers acquired a deeper understanding of how to teach reading. Lastly, each program was given the opportunity to review the preliminary score and provide additional information and analysis before the NCTQ publication. The 2020 *Teacher Prep Review* found that teachers had received minimal training in teaching foundational reading skills and lacked an understanding of reading development in children, 51% of the 1,047 traditional teacher training reading programs omit teaching phonemic awareness, and only 53% of the 1,047 reading programs focused on reading fluency (NCTQ, 2020b). Both are key components in a student's reading development.

Clark et al. (2017) examined the reading instructional knowledge of 87 elementary preservice teachers from two teacher education university programs in the West and Midwest of the United States. Each program offered varying reading methods courses. Program A required five reading courses, including "(a) Phonics and the Structure of Language, (b) Children's Literature and Storytelling in the Early Childhood Classroom, (c) Emergent Literacy and Reading; (d) Methods of Teaching Reading Grades 1–3, and (e) Observing Young Children for Reading Strategies and Skills" (Clark et al., 2017, p. 222-223). The required reading courses in Program B were "Classroom Reading Instruction (Tier 1 instruction) and Assessment and Instruction for the Struggling Reader (Tier 2 instruction)" (Clark et al., 2017, p.223). The participants completed a teacher knowledge assessment to measure content and pedagogical knowledge related to phonological awareness, phonics, alphabetic principle, fluency, comprehension, and vocabulary (Clark et al., 2017). Findings from the study revealed that 68% of preservice teachers understood reading instructional knowledge of phonological awareness, phonics, fluency, comprehension, and vocabulary after taking their respective reading methods courses.

Further, the study findings revealed that the preservice teachers from Program B performed significantly higher in overall reading knowledge. Clark et al. (2017) suggested that the course content being studied was a possible reason for the difference. Program A focused more on a literature approach, while Program B focused on instruction of basic reading components and assessment to determine a student's level of need. Although the overall study results indicated a fair level of reading instruction

knowledge, additional work is needed to improve teacher content and pedagogical knowledge. Clark et al. (2017) concluded that a balance of reading content and pedagogical knowledge in teaching reading may be necessary to develop teacher reading knowledge. Clark et al. (2017) also suggested the increase of professional development for new teachers to fill the content and pedagogical knowledge gaps (Clark et al., 2017). Teachers are an important factor in shaping a student's reading success, and having knowledgeable and skilled teachers can support student learning.

The rate of illiteracy in the United States is unnecessary because the skills needed to reduce the rate of reading failure exist. According to findings from the 2020 *Teacher Prep Review*, improving literacy begins with equipping teachers with the knowledge of how to use research-based instructional strategies in the five essential components of effective reading instruction to teach a balanced approach to reading based on student needs (NCTQ, 2020b). Further findings from the 2020 *Teacher Prep Review* also suggested that literacy improvement continues by equipping teachers with proper assessment skills to make informative decisions regarding their students' reading progress (NCTQ, 2020b). Lastly, teachers need to understand how students learn to read. Education scholars and researchers emphasize the importance of teacher preparation programs' reading curriculum and practices to be evaluated and developed in ways that demonstrate an understanding of how students learn (Castles et al., 2018; Chew & Cerbin, 2021; EAB, 2019; Ehri, 2020; Kelly, 2018; Seidenberg, 2018; Seidenberg et al., 2020). Although no one reading program leads to reading improvement outcomes for

all students, understanding how students learn and develop is directly connected to improving a student's reading ability.

According to the National Board for Professional Teaching Standards (NBPTS, 2016), a teacher's knowledge of their students' reading development and the processes, skills, and strategies they need is necessary to increase their students' reading progress. To develop their students as readers, teachers recognized individual student needs and provided high-quality instruction to support their students' skills and further their reading development (NBPTS, 2016). Researchers have concluded that there are specific types of knowledge that are needed to teach reading effectively (a) the psychology of reading and development, (b) knowledge of language structure and its application, (c) practical skills of instruction in a comprehensive reading program, and (d) assessment of classroom reading and writing skills (Clark et al., 2017; Moats, 2020; NBPTS, 2016; P. C. Snow, 2021; Tunmer & Hoover, 2019).

Jordan and Bratsch-Hines (2020) conducted a study of 66 kindergarten and first-grade teachers to investigate how a teacher's reading knowledge was associated with the pedagogy they used to engage students in reading across five instructional strategies (a) discrete skills—teaching skills in isolation, (b) print awareness, (c) active learning—learning by doing, (d) collaborative learning—student application of content based on interaction among peers, and (e) comprehensive instruction—multi-focused approach of the elements of reading instruction. The findings of their study supported the idea that a teacher's pedagogical knowledge of reading significantly influences the instructional strategies they use (Jordan & Bratsch-Hines, 2020). Further, Jordan and Bratsch-Hines

(2020) discussed that the teachers who demonstrated greater reading knowledge were more likely to be aware of the benefits of using a comprehensive instructional approach in reading instruction.

Teaching reading requires an extensive knowledge and skills base. Pittman et al. (2019) examined teacher knowledge of basic reading instruction, phonology, phonics, and morphology of 150 general education teachers in 11 low socioeconomic schools in Texas. The main findings from the study indicated that teachers did not exhibit explicit knowledge to teach struggling readers effectively. Further findings revealed that teachers demonstrated a basic knowledge of phonological awareness but lacked advanced phonemic awareness and morphological knowledge. Though teachers implemented a research-based reading program that focused on the five components of literacy identified by the NRP, Pittman et al. (2019) concluded that teachers had not received adequate training in reading instruction to teach students how to read effectively. Learning to read is a necessary skill for students, and teachers need to be able to guide students to succeed with increasing high-level literacy demands (Clark et al., 2017; Didion et al., 2020; Moats, 2020). If students are to be proficient readers, they require teachers to have the knowledge to teach them how to read (Pittman et al., 2019); "explicit teaching requires explicit understanding" (Washburn et al., 2011, p. 38, as cited in Pittman et al., 2019). Teacher knowledge of teaching reading is necessary to understand how reading develops and provides effective instruction.

Teaching students how to read is a school's essential responsibility as it affects their success in other academic areas. Tunmer and Hoover (2019) maintained that

effective reading teachers and specialists understand the cognitive processes required for reading and recommended using the cognitive foundations framework in developing instruction that addresses students' reading needs by supporting "critical thinking about reading, its assessment, and its teaching" (p.75). Teachers can provide more focused instruction when they understand their students' individual learning needs (Chew & Cerbin, 2021; Tunmer & Hoover, 2019). Developing teachers' pedagogical knowledge of how to teach reading can help them understand their students' developmental needs and provide interventions to address them.

Many schools are on the path toward improvement and discovering those characteristics that will guide them toward success. Padilla et al. (2020) identified 11 effective school characteristics and practices implemented in Title I schools that have demonstrated high academic achievement in high-poverty schools. The characteristics and practices noted were categorized in the following areas: instruction, staff, environment, professional development, curriculum, resources, leadership, improvement, culture, parents, and vision. There was not a particular characteristic found among all schools. However, instruction was identified as the important school characteristic in nine of them, and the other two schools identified it as a close second.

Further, instruction was also considered the strongest and most accurately applied characteristic and practice within the school. The instruction was rigorous, purposeful, varied, supported, multifaceted, and aligned to state learning standards. Schools also prioritized allocating sufficient time to maximize student learning (Padilla et al., 2020).

Although many characteristics define an effective school, quality instruction by knowledgeable teachers is identified as important.

Teacher beliefs can contribute to their ability to incorporate their reading knowledge into practice. Suárez et al. (2020) conducted a case study of 6 elementary teachers in the classroom context from the Canary Islands, Spain, to analyze the relationship between their beliefs, teaching practices, and discourse about learning to read. Suárez et al. (2020) wanted to determine if teachers used the evidenced-based reading practices of phonemic awareness, phonics, fluency, vocabulary, and comprehension to improve reading skills. The study by Suárez showed that over 50% of the teachers' instructional time was not committed to using these evidence-based practices. Further, there was no evidence of teachers using an instructional sequence to teach phonics. Feedback was the most used practice, followed by teaching materials, and direct instruction focused on fluency and comprehension-based activities. Suárez et al. (2020) concluded that the instruction provided by the teachers in this study differed from and was unaligned with recommendations for teaching children how to read. Suárez et al. (2020) suggested that schools provide the tools teachers need through professional development to increase their pedagogical knowledge and keep them current on evidenced-based practices for teaching reading. Having knowledge of teaching reading is only as effective as it is implemented into practice.

Suárez et al. (2020) concluded that the content of professional development should address the following: (a) the connection between language development and reading, (b) classroom strategies for teaching word recognition, vocabulary,

comprehension, and fluency, (c) strategies to implement the connection of combining reading and writing instruction, (d) best strategies for teaching reading and the materials to implement those strategies, (e) assessing student learning and performance, (f) creating a balance between theory, practice, and technology, (g) knowledge of reading disorders, and (h) using assessment data to guide instruction. Teachers with more pedagogical knowledge of reading may better understand incorporating evidenced-based strategies in their instruction to support students' learning.

A student's difficulty with learning to read may not always result from an inability to read. Students need an opportunity to learn how to read. Moats (2020) recognized the contribution of parents and tutors in supporting a child's reading success; however, the researcher emphasized the critical role of classroom instruction in preventing reading problems as the focus for change. To produce effective teachers of reading, better preparation, professional development, and resources are necessary (Moats, 2020). Although other factors can influence a student's reading performance, a student's best opportunity for success is based on informed pedagogy from knowledgeable teachers focusing on targeted reading acquisition skills.

Despite the amount of research and scientific evidence of developing skilled readers, there remains a lack of knowledge on implementing these practices into reading instruction. Researchers contended that this is due to limited teacher knowledge in understanding the structure of language by understanding the relationship of sounds to words, spellings, and meanings and how reading develops (Castles et al., 2018; Clark et al., 2017; Moats, 2020; Seidenberg et al., 2020). Similarly, researchers suggested that

understanding how students learn to read provides teachers with the knowledge to make informed decisions to translate into effective pedagogical practices that improve their students reading acquisition (Castles et al., 2018; Chyl et al., 2021; Ehri, 2020; Jordan & Bratsch-Hines, 2020; Lonigan et al., 2018; Myrberg et al., 2019; NBPTS, 2016; P. C. Snow, 2021; Tunmer & Hoover, 2019). Knowledgeable teachers are critical in understanding where their students are developmentally in the reading process and in providing appropriate instruction based on their level of development (Moats, 2020; Padilla et al., 2020; Suárez et al., 2020). To address the problem of low reading scores, developing a teacher's pedagogical knowledge in reading development and instruction is important.

To synthesize the above research about what is known on the topic of pedagogical knowledge is that extensive teacher knowledge is dependent on developing student proficient reading outcomes (Chew & Cerbin, 2021; Clark et al., 2017; EAB, 2019; Moats, 2020; Myrberg et al., 2019; NCTQ, 2020b) and the importance of teacher preparation programs' reading curriculum and practices to be evaluated and developed in ways that demonstrate an understanding of how students learn (Castles et al., 2018; EAB, 2019; Ehri, 2020; Kelly, 2018; Seidenberg, 2018; Seidenberg et al., 2020). Other main points can be summarized by noting that teachers must recognize individual student needs and provide high-quality instruction to support students' skills (NBPTS, 2016), and teaching reading requires an extensive knowledge and skills base (Clark et al., 2017; Moats, 2020; NBPTS, 2016; Pittman et al., 2019; P. C. Snow, 2021; Tunmer & Hoover, 2019). One controversial issue was that current reading instruction may not be taught by

teachers with pedagogical knowledge of how students learn and develop (NCTQ, 2020b). What remains to be known about pedagogical knowledge is teachers' perceptions of how schools provide reading pedagogical knowledge and how it is implemented into practice, resulting in reading proficiency.

Student-Specific Supports

Reading researchers concluded that achieving proficient reading outcomes is possible. Research has suggested that ninety-five percent of students have the cognitive skills to learn how to read when they receive sufficient direct instruction in foundational reading skills (EAB, 2019; Moats, 2020; P. C. Snow, 2021). However, there is a question about the legitimacy of this statistic. The earlier work of Vellutino et al. (1996) and Mathes et al. (2005) provided the basis for the premise of the statistic; however, Allington (2004) argued that the National Institute of Child Health and Development (NICHD) misrepresented the data from the Vellutino and Mathas studies. Although the studies demonstrated significant reading improvement when students were provided intensive intervention, the studies did not represent 95% of the students studied as the NICHD represented before the U.S. Senate Committee on Labor and Human Resources (Allington, 2004). However, the NICHD statistic is often used in current reading reform rhetoric.

Vellutino et al. (1996) questioned researchers' neglect to study the effects of a student's educational history to control for their inability to read. The failure to include the type of instruction a student has received can mask as cognitive inability or disability when limited exposure or inadequate instruction may be the cause for reading difficulty.

Vellutino et al. (1996) conducted a longitudinal analysis to compare the response to early and labor-intensive intervention with cognitive profile analysis to evaluate the etiology of reading disability among kindergarten through fourth-grade students in the Albany, NY, area. Students were given assessments to determine cognitive abilities and basic literacy skills. The target sample included 1,284 first-grade students assessed in kindergarten. Students determined to be poor readers were assigned to two groups: tutored or non-tutored. Students in the tutored group received 30 minutes of daily extensive and individualized instruction, and non-tutored students received school-based remediation. Students were evaluated annually from kindergarten through fourth grade to determine progress and assess for cognitive ability identified with reading ability (Vellutino et al., 1996). Results of the study found that after one semester of daily tutoring, 67.1% of the poorest readers scored within the average to above average range of reading achievement.

Additionally, 15% of the poorest readers scored in the severely impaired range, which equated to 1.5% of the population studied. This result supported the idea that the students identified as poor readers did not have cognitive deficits and reading difficulties but deficits in experience and instruction (Vellutino et al., 1996). Even though this study is older, findings indicated that providing students with early, labor-intensive, and individualized remediation can increase reading skills among students with reading difficulties (Vellutino et al., 1996). The Vellutino study demonstrated possible solutions to low reading performance for students with reading difficulties.

Mathes et al. (2005) investigated the effectiveness of combining classroom instruction and supplemental intervention for 298 first-grade students at risk for reading

difficulties. Results indicated that the at-risk students receiving supplemental intervention performed higher on measures of reading and reading-related skills than those who received only classroom instruction. Further, the rate of growth was typically higher in the at-risk group compared to their higher achieving peers. However, they did not achieve levels of academic performance commensurate with their higher performing peers. The higher performing peers were in the high average range, and Mathes et al. (2005) asserted it was attributed to the high quality of instruction within the schools. Mathes et al. (2005) also reported that despite not achieving the same academic level as their peers, the rapid progression of students at risk for reading difficulties worked toward closing the achievement gap. Reading is a learned skill that is foundational for learning and requires years of formal instruction and practice to develop because human brains are not instinctively capable of performing the necessary functions to read (Castles et al., 2018; Chyl et al., 2021; EAB, 2019; Petscher et al., 2020; Rastle, 2018; P. C. Snow, 2021). Though most students can learn how to read, not all students learn the same way (Chyl et al., 2021; EAB, 2019). Despite the research that indicated most children can learn to read, the rate of reading failure remains high (P. C. Snow, 2021). More information is needed to translate the current knowledge of how students learn to read into practice.

An important part of an elementary student's school career is to develop reading skills; however, meeting the diverse needs of all learners can make teaching reading challenging for teachers. Student-specific supports provide early identification and intervention to help struggling students succeed. Schools today face an ever-increasing diversity of students who require a more responsive approach from teachers (Parsons et

al., 2018; Risko & Reid, 2019). Researchers support using adaptive teaching, adapting instruction based on student needs, to meet those challenges (Förster et al., 2018; M. Vaughn, 2019). In their research synthesis, Parsons et al. (2018) examined studies on adaptive instruction to understand how it meets all students' learning needs. Parsons et al. (2018) found adaptive instruction to be socially constructed as teachers use their pedagogical knowledge and knowledge of the student to adapt their instruction to meet student needs. This thought aligned with Vygotsky's understanding of how students learn best within their ZPD development, which is constantly developing as students interact with others to actively construct knowledge to support deeper understanding and growth (Vygotsky, 1978). Many types of student-specific supports exist, but adaptability is important in helping teachers address their students' needs to support their learning and provide all students with a quality education.

Adaptive teaching is an important component of implementing effective reading instruction. However, teachers can feel restricted from being able to teach reading in a way that makes learning relevant for all students. M. Vaughn (2019) completed a yearlong multi-case research study of six teachers in three rural schools in the U.S. Pacific Northwest. The use of adaptive teaching during reading instruction was examined. Each school was identified as having a high percentage of students from families living below the poverty level. In 72 observations, researchers reported 184 adaptations made during reading instruction. The common adaptations included modeling a skill, inserting a mini-lesson or new activity, providing a resource or example, suggesting a different perspective, and pulling a small group. Teachers used their

pedagogical knowledge and knowledge of their students to adapt their instruction based on observed student needs. Findings also showed the variability of teacher adaptability, which led M. Vaughn to question why some teachers were more inclined to instinctively adapt their instruction than others. One specific observation of a trained Reading Recovery teacher, who held a master's degree and national board certification, missed many opportunities to adapt instruction when students presented with questions and difficulty. When asked about those opportunities, the teacher responded that she felt obligated to adhere to the literacy curriculum and pace of instruction dictated by the school. M. Vaughn (2019) noted that the teacher's vision to meet the individual needs of her students did not align with her practice.

Further, findings revealed the challenges of adapting instruction to meet student-specific needs, including adhering to the curriculum and its pacing. M. Vaughn (2019) suggested protecting teacher autonomy in their reading instruction as it relates to providing student-specific support for their students instead of mandating fidelity to a mandated literacy program. To navigate the complexity of the classroom, recognizing and promoting teachers' ability to adapt their instruction despite restrictive policies is important in providing an equitable learning environment for all students.

Achievement gaps have existed among students receiving special education services and in the general education classroom, yet one state is working to close that gap. Butler and Nasser (2020) examined the curricular and instructional approaches of 25 high-performing third-grade teachers from four schools in Illinois having the lowest academic discrepancy between students in general education and special education in

reading. Butler and Nasser (2020) wanted to identify the best approaches used by the schools to reduce the academic discrepancy for all students to meet Illinois third grade reading standards. Results of the interviews indicated that teachers provided the same general education curriculum to students with special needs. Teachers noted that the general education curriculum included curriculum guides that addressed the special education population and provided an intervention component. Overall, the intervention component was implemented with fidelity and with minimal changes. Eighty percent of the teachers believed the curriculum guides were a significant part of the curriculum's success in providing student-specific support (Butler & Nasser, 2020). Additional instructional approaches included co-taught and inclusion classrooms, differentiation, and time for professional planning and collaboration (Butler & Nasser, 2020). These schools offered insight into providing supportive classrooms for all students and how their instructional approaches helped them meet academic state standards.

Finding an effective approach that targets instruction to meet student needs within their ZPD is the goal of differentiated instruction. Martinez and Plevyak (2020) completed a study of two second-grade classrooms totaling 39 students with varying reading abilities and not receiving special education services to evaluate the effectiveness of various teaching styles on student mastery of Ohio's second-grade common core reading standard of describing how characters in a story respond to major events and challenges. Classroom 1 implemented small group instruction focused on the same skill; however, differentiated instruction was used in the small group setting by using texts based on student's reading levels. Classroom 2 implemented whole-group instruction

using the same mentor texts. Results from the study indicated that providing targeted instruction based on the student's reading ability resulted in higher growth in mastering the reading standard skill. Students in Classroom 1 were more engaged and focused and demonstrated steady growth, a 3.9-point growth from pre- to post-assessment. The growth of Classroom 2 was 0.7 points from pre- to post-assessment. Martinez and Plevyak (2020) maintained that providing instruction within a student's ZPD allowed the teacher to tailor instruction to the student's specific needs.

Further observation demonstrated an increased confidence and participation rate in the small group setting among students who were quieter in a whole group setting. The teacher of Classroom 2 observed participation from students who made the most growth, but quieter students fell through the cracks during whole group instruction. Even using strategies such as Think-Pair-Share, the quieter students relied on their more outspoken peers to respond to the question. Further, much of the instructional time was devoted to classroom management responses of keeping students focused and attending to instruction. Martinez and Plevyak (2020) concluded that small group instruction provided more student focus and engagement and allowed teachers to provide immediate feedback regarding understanding new skills. Evaluating the type and quality of instruction is important in providing effective instruction that targets students' specific areas of need.

Another type of student-specific support is multitiered systems of support (MTSS). An MTSS is a framework that takes a proactive approach to assist educators in identifying and providing support for struggling students in academic and behavioral areas. An MTSS framework includes (a) universal screening, (b) tiered intervention, (c)

ongoing data collection and assessment, (d) schoolwide implementation, and (e) parent involvement (Regional Educational Service Agencies, n.d.). In reading, an MTSS framework identifies at-risk students to assist teachers in providing reading intervention support. Coyne et al. (2018) evaluated the effects of a statewide reading initiative that used MTSS practices on at-risk student reading outcomes. The intervention was based on Tier-2 instruction, a small-group supplemental reading intervention. Coyne et al. (2018) conducted a study with 318 students in first through third grade from four different elementary schools across a Northeast state in the U.S., identified as having repeatedly low student reading achievement. Combined student demographics showed that 33% were English Language Learners, 74% were Hispanic, 14% were Black, 9.5% were White, and 2.5% represented other races or ethnicities. Participating schools also implemented organizational improvement practices, including "establishing leadership and data teams, developing a schoolwide reading plan, implementing universal screening and progress monitoring assessments, and committing to a tiered instructional model" (Coyne et al., 2018, p.353).

Further, all participating schools used the same reading intervention program, Proactive Early Interventions in Reading, for this study and received state support to ensure consistent intervention implementation and instructional intensity with fidelity. Overall findings from the first year indicated that supplemental Tier-2 intervention implemented within an MTSS framework had a statistically significant effect on students' phonemic awareness scores, 18 percentile points higher, and word decoding scores 12 percentile points higher. However, there were no considerable effects on

reading fluency and comprehension. Coyne et al. (2018) believed that building foundational reading skills, phonemic awareness, and basic word decoding skills in the early grades was needed first to develop the advanced reading skills of reading fluency and comprehension in later grades. A secondary analysis was conducted to examine trends across grades and measures. The results revealed larger effects in first and second grade, modest effects in third grade in phonemic awareness and decoding, and a statistically significant effect on comprehension in second grade. Overall, evidence was found to support the consistent use of intervention with fidelity and instructional integrity on the foundational reading skills of students experiencing reading difficulties in low-performing schools. Coyne et al. (2018) also suggested that supplemental Tier-2 improves student reading outcomes in varying low-performing schools. Implementing an MTSS framework can provide administrators and teachers with the necessary information to provide quality, targeted instruction for students that helps them reach their fullest potential.

To address the problem of low reading proficiency, Response to Intervention (RtI) is another approach many schools use to provide student-specific supports. The distinguishing element of an RtI model is its use of three different tiers of instruction. Placing students in one of the three tiers is established on a data-based decision-making process (Kent et al., 2017). The tiers are differentiated according to the level of support a student needs. A tier 1 group is considered the core reading instruction program of the school and does not require intervention; however, differentiation is recommended to address any reading difficulties students may encounter. Students in a tier 2 group

required some supplemental intervention through small group instruction to address targeted areas of need. A tier 3 group represented the most significant level of support for a student and provided more intensive intervention in an even smaller group size (Kent et al., 2017). Kent et al. (2017) conducted a yearlong study of 100 fourth-grade students to examine instructional practices during Tier 1, core reading instruction, and supplemental reading instruction, targeting specific needs and their impact on reading outcomes for students with reading difficulties. The students were identified as having reading difficulty and performed at or below 30% on standardized reading assessments. Students represented in the sample were from Florida and Texas and selected from among 22 classrooms between the two states. Demographics of the student sample consisted of 43% African American, 32% Caucasian, 17% American Indian, 3% Asian, and 4% multiracial.

Further, 14% of the sample were English Language Learners, and 16% were considered to have a disability; learning disability and speech impairment were the most prevalent disabilities (Kent et al., 2017). The reading programs incorporated the important components of effective reading instruction, including advanced word analysis strategies, fluency, vocabulary/word knowledge, and comprehension strategies. Further, the reading programs engaged students in a literary analysis of the texts. Two instructional variables, reading instruction and supplemental intervention, were identified, and coded for content and grouping (Kent et al., 2017). Students were observed twice yearly, and teachers were rated based on instructional quality. Findings from the study indicated no significant effect of supplemental instruction on word reading

and comprehension outcomes; however, there was minimal time devoted to addressing these skills during the intervention. Kent et al. (2017) reported that small-group instruction accounted for 2 minutes, or 3%, of instructional time during Tier 1.

Further, the actual reading instruction time was even lower due to non-reading activities such as behavior management during the allotted reading instructional block time (Kent et al., 2017). Study results also revealed significant variability in the total Tier 1 instructional time, from a half hour to two hours, despite using similar reading programs and having a 90-minute requirement for core reading instruction. Kent et al. (2017) also found that differentiated instruction was not implemented during the teacher's direct instructional time with students. Less than a third of the students received direct supplemental reading instruction. Differentiation was utilized more during center work; however, there was a lack of true differentiation based on student needs. Kent et al. (2017) attributed the lack of differentiation to a lack of time. Results of the study also showed that the main focus of reading instruction was on comprehension and vocabulary, which was representative of the shift in the type of reading in the upper elementary grades.

Further, Kent et al. (2017) reported the absence of phonics and structural analysis instruction for the students who were in the 30th percentile for reading comprehension and below the 40th percentile in word reading and decoding skills. Kent et al. (2017) proposed that providing intervention in basic foundational skills could enhance students' oral reading fluency, thus improving their comprehension of the text. Further findings revealed a minimal effect on the impact of Tier 1 and supplemental instruction on student

reading outcomes, and an increase in only Tier 1 text reading instruction or only oral reading fluency practice did not identify a relationship to comprehension outcomes. Kent et al. (2017) believed it to be a result of teachers deciding to increase instruction in one area and decreasing time in other instructional areas. The last finding from the study indicated a positive effect of supplemental instruction on reading fluency outcomes for students who received reading intervention services, indicating that even a small amount of strategic supplemental intervention can produce positive reading fluency outcomes (Kent et al., 2017). Understanding a teacher's pedagogical practices can provide insight into intervention approaches to improve reading outcomes for struggling readers.

Many students do not receive the necessary academic support to attain grade-level reading expectations. "Providing services to students with the greatest academic needs is a social justice issue in the sense that there is no acceptable failure rate" (Austin et al., 2017, p. 208). Connor and Morrison (2016) posited that students come to school with varying abilities in the learning process, which makes differentiation a key component in developing a student's full reading potential. Further, Connor and Morrison (2016) argued that meeting the needs of all students in learning to read proficiently is possible. Still, it calls on schools to avoid fads and politically influenced programs and focus on fostering research partnerships of educators and researchers to develop instruction and intervention that supports student learning (Connor & Morrison, 2016). Although the rate of growth of students who struggle in reading may not be commensurate with their peers, they can still make significant growth with adequate support and intensive intervention.

Research around the idea of student-specific supports substantiated that most students can read (EAB, 2019; Moats, 2020; P. C. Snow, 2021). Further, some researchers maintained that those students needing special education services lacked instruction and experience from knowledgeable teachers rather than having cognitive disabilities (Austin et al., 2017; EAB, 2019; M. Vaughn, 2019). Although researchers acknowledged that reading is attainable for most students, not every student learns in the same way (Chyl et al., 2021; EAB, 2019). To meet this need, student-specific supports are implemented to identify and intervene to meet those challenges. Researchers found that when teachers apply their pedagogical knowledge of teaching reading with their knowledge of their students, they can more effectively address students' individual learning needs (Förster et al., 2018; Parsons et al., 2018; M. Vaughn, 2019).

Similarly, researchers posited that finding a student's ZPD was key to tailoring instruction based on a student's need (Martinez & Plevyak, 2020). Creating a supportive learning environment based on instructional approaches for all students is possible (Austin et al., 2017; Butler & Nasser, 2020; Connor & Morrison, 2016). To achieve equitable reading outcomes for all students, student-specific supports that are individualized to meet student needs should be considered a key component to improving a student's reading skills.

To synthesize the above research about what is known on the topic of student-specific supports is that student-specific supports are designed to provide early identification and intervention to help struggling students succeed (Parsons et al., 2018), and not all students learn in the same way (Castles et al., 2018; Chyl et al., 2021; EAB,

2019; Mathes et al., 2005; Petscher et al., 2020; Rastle, 2018; P. C. Snow, 2021). Other main points can be summarized by noting that achieving significant reading improvement is possible (Austin et al., 2017; EAB, 2019; Moats, 2020; P. C. Snow, 2021; Vellutino et al., 1996), and the use of adaptive teaching can be used to meet those challenges (Butler & Nasser, 2020; Connor & Morrison, 2016; Förster et al., 2018; Martinez & Plevyak, 2020; M. Vaughn, 2019). One controversial issue was the variability of teacher adaptability (Kent et al., 2017; M. Vaughn, 2019). What remains to be known about student-specific supports are teachers' perceptions of how they may incorporate student-specific supports to address their students' reading needs.

Reading Experts' Response to the Lack of Reading Progress

The reading decline has existed for decades among students in the United States, revealing that students continue to fall behind in learning to read, especially among the percentage of students who struggle the most with reading. Although there may be a disproportionate representation of racial and socioeconomic groups at the bottom, according to the NCES statistic, this problem has spanned across every racial and socioeconomic group. All students are represented at the bottom of the reading decline (Sparks, 2021). Scholars, reading researchers, and educational professionals responded to the reason for the lack of reading progress.

Research in education has played a vital role in improving learning outcomes for students and should not be overlooked in the reading reform effort. Kilpatrick (2015), a reading researcher specializing in reading development and reading difficulties, identified a gap between research and practice. He argued that the gap is due to a lack of awareness

of reading research among educational professionals, distrust of the scientific study of reading, and the perpetual *Reading Wars* that limit open discussion about current reading research on literacy development and reading difficulties. Research supports that most reading difficulties in at-risk student populations can be prevented or corrected with highly effective intervention methods such as direct, explicit, and systematic phonological awareness and explicit letter-sound instruction (Kilpatrick, 2015). Similarly, Dr. Cantrell (2021), a professor of reading education at Texas A&M University and long-time reading researcher, argued that the quality of instruction through a knowledgeable teacher is the most influential component of a student learning how to read. Cantrell (2021) held that decades of empirical research support that the best way to teach reading is through teaching the structure of the language in a direct, explicit, and systematic approach.

Further, Cantrell acknowledged that some students would learn to read in other ways. However, 40% of students will continue to struggle to learn to read without the direct, explicit, and systematic approach (Cantrell, 2021). Likewise, Shanahan (2020), a leading reading researcher, argued that the NRP report did not state that phonics instruction was the only approach to teaching students how to read but demonstrated that providing explicit phonics instructions improved student reading outcomes in addition to phonemic awareness, vocabulary, comprehension strategy, and fluency instruction. However, according to Kilpatrick (2015), there is little evidence to support the implementation of those interventions as part of current reading instruction practice. Leading reading researchers and experts expressed concern that the school reform effort

will be unsuccessful without a sustained commitment to implementing effective reading practices in the classroom.

Improving reading proficiency that leads to reading reform contains many possibilities. The final step in the process of reading reform is classroom implementation of reading practices. If what is known to be effective in teaching students to read is not implemented in the classroom, then the problem could continue to exist. Shanahan (2020) indicated that the reading reform discussion should include teacher input and experience, ensuring their voice is heard and represented. D. Ravitch (2016), one of the foremost authorities on education in the United States, also agreed, indicating that her observation of the educator's perspective was a key factor in her perspective of school reform being completely transformed. D. Ravitch (2016) characterized teachers as having reform fatigue, lack of support, or confidence in reform. She described the doubt educators had in the latest and greatest reading fixes of the day, but because they were bound to follow reform based on local and federal mandates, they reluctantly followed (D. Ravitch, 2016). For true school reform initiatives, the teacher voice should be considered to have valuable input.

Shanahan also argued that the increased amount of standardized testing has left teachers with an inaccurate perception of the purpose of reading comprehension. Shanahan (2017) recommended that teachers teach students how to read and interpret text through linguistics, vocabulary, background, sentence structure knowledge, knowledge of text, and conceptual components. However, he has found that much time is spent on being able to answer specific test-ready questions. Students must first decode proficiently

to read and understand a text effectively. From there, it is important to increase the linguistic and conceptual demand of comprehending text by giving them the experience of interacting with the complexities of text. Likewise, D. Ravitch (2019) also faulted the punitive push of testing accountability but failing to recognize the impact of poverty on low academic performance on the failed state of our education system. Nations with better educational performance than the United States, including Finland, Japan, Korea, and Singapore, do not privatize their education system or participate in high stakes testing regimes.

Further, countries performing better than the United States in education strengthen their social welfare programs. Those countries provide a well-rounded education, including the arts, sciences, history, and other subjects, rather than limiting it to reading and math instruction. D. Ravitch (2019) further argued that these other countries strengthen their education profession by screening to select highly qualified teachers, providing increased salaries, offering support and mentoring systems, and better working conditions. D. Ravitch (2019) had been hopeful of the benefits of testing and accountability; however, upon a significant self-reflecting process, she questioned her lack of confidence in the reforms she so adamantly supported. D. Ravitch (2019) explained that her change of thought was her observation of how previous reform ideas were put into practice and did not live up to their promise.

Accountability is an integral part of education reform. D. Ravitch (2019) suggested an increase in accountability of district leadership and elected officials to address the concern of underperforming schools. As assistant secretary in charge of the

Office of Educational Research and Improvement, D. Ravitch (2016) discovered that "the federal government is prohibited by law from imposing any curriculum on states or school districts" (p.8). The federal government used independent voluntary professional groups to bypass imposing curriculum on states and school districts. D. Ravitch (2016) also stated that corporate reformers' view of education is comparable to a business model in developing a plan to establish how goals will be measured but having no educational benefit. D. Ravitch (2016) believed pedagogical territory should be left to educational professionals rather than elected officials. To improve the nation's schools, D. Ravitch (2016) suggested the following (a) stop the continual school reorganization of structure and management, (b) improve curriculum and instruction and the conditions in which teachers work and students learn, (c) discontinue relying on tests to decide the future of schools, and (d) end the incessant focus on data that changes the purpose of education. All students deserve the best education possible; disregarding the important purpose of education may create a lost opportunity.

Summary and Conclusions

Reading has been considerably researched over the decades, leading to debates about the best way to teach reading. Researchers have shown that reading is a complex process and that not every student learns to read in the same way. However, most students can learn to read, provided they are given the opportunity to do so. Recent research on reading has focused on practices, the science of reading, pedagogical knowledge, student-specific supports, and the impact each contributes to student reading outcomes.

The literature reviewed for this study supported the idea that many different factors influence a student's ability to learn to read. One factor was the impact of the science of reading in understanding how students learn to read—understanding the cognitive processes that occur when reading can inform reading instruction regarding what to teach, how to teach, and when to teach. Additionally, a review of the literature demonstrated the need for teachers to be strong in their pedagogical knowledge of reading development. The difference between good and poor readers was high-quality instruction from experienced and knowledgeable teachers (Northrop, 2017). Lastly, regarding student-specific supports, research supported that most students have the cognitive ability to learn how to read when provided with instruction based on student needs (EAB, 2019; Moats, 2020; P. C. Snow, 2021). However, with this level of understanding and knowledge base, there is limited focus on the practices of Massachusetts third and fourth-grade teachers and their potential impact on their reading proficiency progress.

The present study will contribute to address the gap in understanding the practices of teachers in Massachusetts schools where they have demonstrated a consistent pattern of excellence in reading proficiency. This qualitative study will extend knowledge to education stakeholders to help them develop an actionable plan of best practices for improving reading proficiency.

Chapter 3 includes the research method used for the study. It also includes the research design and rationale and the role of the researcher, followed by a more thorough

discussion of the methodology. Lastly, Chapter 3 includes measures I took to ensure trustworthiness.

Chapter 3: Research Method

The purpose of this basic qualitative study was to describe the practices perceived by third- and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. The findings of this study could add to the recent research on reading best practices and help education stakeholders develop a standard of best practice for improving reading proficiency by providing teachers and administrators with valuable knowledge and effective skills for teachers to integrate and apply to classroom reading instruction. The major sections of Chapter 3 comprise the research design and rationale, role of the researcher, methodology, and issues of trustworthiness. The methodology section includes details on the participant selection process, instrumentation, recruitment and data collection procedures, and the data analysis plan. The trustworthiness section contains detailed information about ethical procedures to ensure the rights and confidentiality of the participants. Each section provides an explanation of how these components were applied in the study. A summary of key points concludes the chapter.

Research Design and Rationale

Qualitative research emphasizes the researcher as an active participant in engaging and recording the experience of the participants within their natural context (Patton, 2015; S. M. Ravitch & Carl, 2016). Qualitative researchers seek an in-depth understanding of a phenomenon within its natural setting. To gather insight into an individual's lived experience, qualitative researchers derive meaning through the firsthand experience of participants (S. M. Ravitch & Carl, 2016). A qualitative approach was appropriate for the current study because the purpose was to describe the practices

teachers perceive to improve reading proficiencies in Massachusetts third- and fourth-grade classrooms where students were demonstrating growth in reading. The qualitative design was basic because of its appropriateness in investigating people's experiences as they relate to their real-life context and gaining an understanding of how people gain meaning from their experiences (see Merriam & Tisdell, 2016).

Further, I asked what practical knowledge could be learned from the study (see Patton, 2015). The basic qualitative design allowed me to describe and make meaning of the complex phenomenon of understanding the practices used by third- and fourth-grade teachers in Massachusetts elementary schools to improve student reading proficiency (see S. M. Ravitch & Carl, 2016). The current study provided a deeper understanding of Massachusetts elementary teachers' patterns of practice that could provide insight for other schools in their efforts to improve student reading proficiency (see Kahlke, 2018; Merriam & Tisdell, 2016).

Research questions in basic qualitative studies are straightforward and open-ended, bringing focus to the study in understanding, explaining, and describing the phenomenon of the study (Burkholder et al., 2016; S. M. Ravitch & Carl, 2016). Recognizing that low reading achievement scores continue to be a problem in elementary schools across the United States, I attempted to provide an in-depth understanding of the practices of elementary teachers in Massachusetts, where students demonstrated a consistent pattern of higher-than-average performance in reading proficiency. I focused on one research question with the hope that the perceptions of Massachusetts elementary school teachers would add to the understanding of their patterns of practice to provide

insight for other schools in their efforts to improve student reading proficiency. What do third- and fourth-grade teachers perceive as practices they use that contribute to improving the reading proficiency of Massachusetts elementary students?

Role of the Researcher

In qualitative research, the role of the researcher is to capture the participants' lived experiences to develop an understanding of the phenomenon. Interviews provide deep, rich, individual, and contextualized data and are the basis for many qualitative studies (S. M. Ravitch & Carl, 2016). Because the researcher is the primary instrument of data collection and analysis, they should be reflexive, conscious, and aware of how that role can impact the conversation during the interview (McGrath et al., 2019). For the present study, I was instrumental in collecting, interpreting, and analyzing the data. My role was an observer. The purpose of this basic qualitative study was to describe the practices perceived by third- and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. I described the practices used in the context of a school environment and included sources of data from semistructured interviews with teachers.

Reflexivity is a key component in qualitative research. Reflexivity refers to the ongoing awareness and questioning of the researcher's beliefs, judgments, and practices during the research process and how they may influence the research. Reflexivity has been considered a journey of learning. Reflexivity requires self-reflection on the research process regarding potential biases, theoretical preferences, setting, participant selection, data collection, and analytical interpretations (S. M. Ravitch & Carl, 2016). My role and

experiences shaped my reflexivity and helped me realize that I was an active part of the research process, which was not independent of my positionality but was an iterative process of challenging my perspectives and assumptions about the social world and myself as the researcher (see Palaganas et al., 2017). Constructing meaning from lived experiences was the contribution I could make to provide a learning opportunity for others, and sharing my reflexivity and positionality was an important part of working toward creating meaning (see Palaganas et al., 2017).

I have 23 years of experience in education as a teacher and principal; however, I had no supervisory role over the participants or previous relationships with them. Therefore, it was important to establish a positive relationship to build trust with each participant during the interviews. To lessen the potential of an imbalance of power, participants were told that their participation would be ongoing and voluntary, and they could withdraw at any time without experiencing any penalties. Confidentiality of participants was guaranteed, and incentives to participate in the study were not provided.

Methodology

Participant Selection

To gain a deeper understanding of the phenomenon, the researcher seeks to answer the research question thoroughly; therefore, sample size is not as important as data saturation (S. M. Ravitch & Carl, 2016). Regarding sample size, Braun and Clarke (2021) supported the idea that determining sample size for data saturation related to research purposes should be based on a reflexive approach that is established on the breadth and focus of the research question; the method of data collection; the desired

diversity of the sample; and the purpose, constraints, and goals of the study. To that end, Braun and Clarke (2021) recommended choosing a sample size range to provide adequate data to provide an in-depth story related to the phenomenon. The original plan was to recruit 20–25 participants. I anticipated that my sample size would provide saturation for my study based on the number of teachers who agreed to participate.

Further, a large sample from multiple places was needed to triangulate the data, so the original plan included a sample size of 20–25 third- and fourth- grade teachers across five areas of Massachusetts where students were demonstrating growth in reading. Participants were selected based on established characteristics aligned with the objective of this study. The criteria for participant selection for my study were teachers who (a) are current third or fourth-grade teachers who teach reading in the state of Massachusetts, (b) taught reading for at least 1 year within the state of Massachusetts, and (c) teach at a school that is demonstrating growth in reading as reported by state reading assessments. I emailed the prospective participants with information about the study. The email included a description of the purpose of the study along with the research question and sample interview questions. Participants were asked to respond to the invitation to participate through an email provided by the participating schools, and then I scheduled the interviews. From there, the original plan was to recruit teachers from five different areas (schools) with a combination of lower and higher socioeconomic status students. Then, within each area, I planned to interview five teachers and analyze the interview data within each group.

Purposeful sampling is the preferred approach in a basic qualitative inquiry to gain information-rich data for an in-depth study to answer the question under study (Patton, 2015). To obtain information-rich cases, I chose to do a purposeful sample. One reason for choosing this sampling approach was that the potential number of cases within my area of study, Massachusetts, was more than could be studied within the time and resources available. Further, a purposeful sample adds credibility by reducing bias or controversy about potential participant selection (S. M. Ravitch & Carl, 2016). A sample of third- and fourth-grade teachers was chosen by first identifying schools across the state that had achieved higher levels of reading proficiency. The original plan was to purposefully select a group of five teachers across five areas of the state.

Instrumentation

In qualitative research, the research instruments that are developed and used to collect data are referred to as tools (S. M. Ravitch & Carl, 2016). I created an interview protocol (see Appendix A) as my data collection tool and used a semistructured interview format with predetermined, open-ended questions. The interview questions were initially based on my research question and what I wanted to discover: The teachers' practices that contributed to a consistent pattern of excellence in reading proficiency.

I used prompts to gather additional information if responses were insufficient to answer the question. Next, I developed additional questions or reordered the questions depending on the responses of the participants and the direction the interview was going. I also used the conceptual framework for my study, Vygotsky's (1978) sociocultural theory, as a basis for additional questions to understand how teachers perceived the

collaborative process of learning how knowledge develops, the sociocultural influence on learning, and how the learning environment through student–teacher and student–peer relationships are developed. The interview protocol is a research instrument that guides the researcher in gathering meaningful data from the participants' experiences to answer the research question and ensure quality and consistency during the interview process (Castillo-Montoya, 2016; Patton, 2015). To ensure the content validity of the instrumentation, I verified that the interview questions measured what I wanted to know by examining each question for alignment with the research question, I created a conversational interview protocol, and I prepared for follow-up questions (see Castillo-Montoya, 2016; Rubin & Rubin, 2012).

Further, before collecting data, I obtained feedback from colleagues similar to the study participants to enhance the reliability of the interview protocol by ensuring that it accurately measured what it was intended to measure. I also consulted with the director of program outreach faculty chair for research and data analysis to validate the content of the interview questions. In addition, because qualitative research is interpretive in nature, S. M. Ravitch and Carl (2016) suggested that interpretive validity be used to address validity. Interpretive validity focuses on understanding the meanings and interpretations people attribute to their actions and perspectives (S. M. Ravitch & Carl, 2016). To develop interpretive validity, I gained meaning through the participants' responses to the interview questions by understanding their perspectives.

Procedures for Recruitment, Participation, and Data Collection

I recruited participants by first gaining permission from school administrators and emailing the letter of cooperation from the Walden Research Center. Once granted permission, I used the participants' school district email addresses provided by the administration to invite them to participate in the study using the Walden University sample letter of invitation and informed consent form, which I altered to my purpose. If prospective participants agreed to participate, I asked them to reply to the email with "I consent." Then I provided my contact information for further questions. Along with the letter of invitation, I emailed a consent form that provided the purpose, background information, interview procedures, voluntary nature of the study, risks and benefits of participating in the study, and steps that would be taken to ensure privacy and confidentiality. Because I had not obtained the minimum number of participants I wanted, I also used snowball sampling to ask participants who agreed to participate to recommend someone I could contact.

When I received the email consent responses, I scheduled interviews with each participant at a mutually agreed upon time and location. The data collection instrument was the semistructured interview protocol I developed (see Appendix A). All interviews were completed by the participant and me. I took handwritten and typed notes within a word-processing program during the interviews and audio-recorded each interview using a video-conferencing platform. Upon completing the interviews, I transcribed each interview for data analysis using the transcription feature in Microsoft Word.

Data Analysis Plan

In this basic qualitative study, I described teacher perceptions of their practices that may contribute to growth in reading proficiency. I used a thematic analysis method to describe teachers' perceptions of their current practices. According to Braun and Clarke (2006), thematic analysis is a foundational method for conducting qualitative analysis. Thematic analysis is used to identify, analyze, and report themes within the data to provide a rich and detailed account of the data. Further, thematic analysis is a good approach to use when trying to understand people's views, opinions, knowledge, and experiences while noting relationships, similarities, and differences in the data (Braun & Clarke, 2006). Braun and Clarke (2006) proposed six phases of analysis to begin a thematic analysis, noting that it is not a linear process but more of a recursive process. The phases include (a) familiarizing yourself with the data by reading through several times, (b) generating initial codes, (c) searching for themes, (d) reviewing themes, (e) defining and naming themes, and (f) producing the report.

Consistent with Braun and Clarke's (2006) phases of analysis, I first familiarized myself with the data by transcribing each interview verbatim. I audio-recorded each interview using a video-conferencing platform and transcribed the interviews using a transcription feature in Microsoft Word. Next, I listened to the audio recording several times to amend what the transcription feature did not pick up correctly to create an accurate transcription. Then I produced a clean copy of the verbatim transcription to make it easier to read and analyze. Credibility was established through member checking. Lincoln and Guba (1985) identified member checking as "the most crucial technique for

establishing credibility" (p. 314). To conduct member checking, I summarized responses from each participant to verify that my written responses accurately represented the interview. Verifying the data helped me ensure that they were not compromised by researcher bias. When participants confirmed their responses for accuracy, the information was considered credible (see Creswell, 2007; Lincoln & Guba, 1985). Providing authentic and reliable findings is the overall goal of member checking.

The second phase of thematic analysis involved generating initial codes across the entire data set and organizing the data relevant to each code. A code is a word or phrase generated by the researcher to represent an interpreted meaning of the data being analyzed (Saldaña, 2016). Coding is a cyclical process involving multiple attempts and varying coding processes to represent and capture data content that helps the researcher identify patterns and generate themes. Coding allows the researcher to connect ideas by looking at data from different points of view (Saldaña, 2016). No one definitive coding method is better than another because each qualitative study is unique and requires a unique analytical approach (Patton, 2015; Saldaña, 2016).

When beginning to code, it is important to remove preexisting ideas or biases of what I, the researcher, may have regarding the responses I seek by approaching the data with curiosity and intrigue. Throughout the first process of coding, I was reflexive by responding to the text and creating memos that identified my impressions during the process that I could expand upon later in the coding process. After I transcribed each interview, I examined the raw data and manually coded the data by evaluating and categorizing the data by hand as opposed to using computer software. I identified and

assigned a code to the text from the verbatim transcript and then explained my reasoning for assigning the code. I worked systematically through the entire data set, giving thorough attention to each data item and coding for as many patterns as possible. As I first engaged with the data, I used open coding to break down the written interview data into individually coded segments by comparing the similarities and differences of the data (Saldaña, 2016). After identifying concepts and themes through open coding, I used axial coding to provide a more detailed and refined analysis of the data. During this process, I focused on finding conceptual similarities and repeated this process several times as I reflected on emerging patterns embedded in the data (Saldaña, 2016). Finding similarities helped to refine and relabel previous data to generate categories.

The third step in the thematic analysis process is to generate themes. After the data was coded, I reexamined and analyzed the patterns in the coded data to organize the codes into potential themes. Themes were developed to understand the practices of third and fourth-grade teachers in Massachusetts elementary schools that may contribute to improving student reading proficiency. After developing initial themes, the fourth step is to review the themes. I completed a deeper review of the themes I identified in the third step to determine if the themes needed to be refined or discarded. The goal of this phase is to develop themes that tell a story about the data (Braun & Clarke, 2006). The fifth step in the thematic analysis process involves defining and naming themes and potential subthemes by further analysis. During this step, I defined the themes by writing a detailed analysis of each theme and developing theme names. The last step in the thematic analysis of the data is to write up the final analysis and results. Discrepant cases,

responses that cannot be accounted for, may be identified during data analysis (Patton, 2015; S. M. Ravitch & Carl, 2016). I considered all responses, even if they were discrepant and did not fit exactly with other responses. S. M. Ravitch and Carl (2016) proposed that discrepant cases should challenge the researcher to ask what can be learned from this outlier. To address discrepant cases, I completed a more thorough examination of the data to determine if recoding data was necessary.

Issues of Trustworthiness

A goal of qualitative research is trustworthiness**,** also referred to as validity. Trustworthiness is the process used by a researcher to assess the rigor of a study (S. M. Ravitch & Carl, 2016). To establish trustworthiness, researchers argued that four criteria must be satisfied: credibility, transferability, dependability, and confirmability (Shenton, 2004). These criteria were applied to this study to increase trustworthiness and provide evidence that the conclusions demonstrated a deep understanding and may be useful in adding to the body of knowledge.

Credibility

Credibility ensures validity through its research design, research instruments, and tools by seeking real-life complexities through intentional site selection and sampling strategies that provide an authentic interpretation of the phenomenon through its research design (S. M. Ravitch & Carl, 2016). To address credibility, researchers must present the actual picture of the phenomenon being studied instead of what they want the data to say. Credibility is achieved by reexamining initial findings and analysis by engaging in alternative themes, patterns, and possible explanations (Patton, 2015; Shenton, 2004). For

this study, the trustworthiness of the findings, in terms of credibility, was explained because multiple methods and data sources were used to gain a deeper understanding of the phenomenon. Specifically, data triangulation and member-checking were planned to increase credibility. Data triangulation is using multiple data sources in a study to increase confidence in the findings (Patton, 2015; Ravitch & Carl, 2016). I also electronically saved all interviews and transcribed data to be reviewed, if necessary, by Walden University.

Transferability

Another criterion to ensure trustworthiness is transferability. Transferability addresses the applicability of the study and uses thick descriptions to allow the reader to determine if the findings can be applied to and replicated in their setting (Merriam & Tisdell, 2016; Shenton, 2004). To aid in the transferability analysis, I provided a thick description of the phenomenon and the context of how my dissertation study took place.

Dependability

Dependability strategies improve a study's trustworthiness by establishing that the study's findings are accurate, consistent, and repeatable. Additionally, if changes occur during the data collection process, they are acknowledged and clearly documented (Burkholder et al., 2016; Shenton, 2004). Further, dependability is demonstrated by providing a rationale for the methods used in collecting the data related to the study's concept (Burkholder et al., 2016; S. M. Ravitch & Carl, 2016). To maintain dependability, I presented a detailed account of the research and data collection process and how the data were analyzed. Specifically, the detailed account included a description

of (a) the specific purpose, (b) how and why the participants were selected, (c) how the data were collected, and (d) how the data were analyzed and interpreted.

Confirmability

The final criterion described is confirmability. Confirmability demonstrates that the findings of a qualitative study maintain objectivity, avoid researcher bias, and can be confirmed through the data by others (Burkholder et al., 2016; Shenton, 2004). It is important for the researcher to understand their role and how their prior experiences and beliefs may influence the research process (Burkholder et al., 2016; S. M. Ravitch & Carl, 2016). Researcher reflexivity is one way to address the researcher's potential influence on the research process (Burkholder et al., 2016; S. M. Ravitch & Carl, 2016). To establish the confirmability of the study, I engaged in reflexivity by using field notes to actively examine any personal biases that may have impacted the research outcomes. Reflexivity was achieved by being transparent about my background and its potential impact on data analysis.

Further reflexivity was achieved by providing details of the data collection process, data analysis, and interpretation of the data and providing a rationale and explanation of the decisions made in the research process. Throughout the reflexive process, I examined my judgments, practices, and beliefs that may have incidentally affected the research during the data collection process. To further establish confirmability, I used an audit trail. According to Merriam (2009), "an audit trail, in a qualitative study, describes in detail how data were collected, how categories were derived, and how decisions were made throughout the inquiry" (p. 223). Further, the

audit trail consists of field notes about the researcher's decisions and processes throughout the data collection process (Burkholder et al., 2016). I kept an audit trail to assist in helping me to think critically about the decisions being made and to be transparent about how I collected and analyzed the data.

Ethical Procedures

Ethical issues should be anticipated and addressed within the research design because there are varying ethical considerations made throughout the research process (Creswell & Poth, 2018). Due to my role as the primary instrument of data collection and analysis, there was a potential for bias on my part that could impact the study's outcome. Being objective and nonjudgmental in my thoughts, observations, and actions could be challenging. This potential bias could be based on my passion for the phenomenon and my experience as an educator for 23 years. However, understanding the phenomenon being studied could provide the background knowledge and ability to write about it.

As an educator, an issue of practice that developed for me was recognizing how to provide effective reading instruction for all students. In pursuing research that addressed this problem of practice, I have sought to better understand how educators of high-performing schools use best practices to improve their students' reading proficiency. I believe insight into this research area could contribute to providing a better understanding of effective teaching methods that move from transactional solutions to transformational changes and improve student reading outcomes by the end of third grade. Further, to address potential issues of bias, I attempted to do the following (a) audio record to analyze the information, (b) have participants review the results, (c) provide diverse ways

to look at the phenomenon through data triangulation, and (d) have peers review findings. I also kept a personal journal to record my thoughts and feelings throughout the process, documenting my relationship with the data and analysis (Patton, 2015; S. M. Ravitch & Carl, 2016).

The main ethical concerns in educational research are confidentiality, informed consent, openness, and to cause no harm (Abed, 2015). The types of questions that were asked were not personal and did not put participants at risk. To handle this, I assured them of confidentiality by providing a formal consent form that included ensuring the confidentiality of each individual and protection against any harm. I gave the participants the choice to decline to answer questions or withdraw from the study at any time. Also, to ensure confidentiality, I excluded all identifying factors of the participants from the results and kept digital and hard copies of the data and participant comments in a locked file box. I will keep the data for a total of 5 years. After 5 years, any digital information will be deleted, and any hard copies will be shredded.

Summary

In the current study, I addressed the problem of a lack of knowledge regarding the practices used by third and fourth-grade teachers that they perceive to improve the reading proficiency of Massachusetts elementary students. In Chapter 3, the rationale for the research design was explained. Also, the role of the researcher was defined, and the methodology was presented. The methodology section included information regarding participant selection, instrumentation, data collection processes, and the data analysis plan. Information regarding issues of trustworthiness was discussed, including credibility,

transferability, dependability, confirmability, and ethical procedures. Following this chapter, Chapter 4 will include the findings from the study.

Chapter 4: Results

The purpose of this basic qualitative study was to describe the practices perceived by third- and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. I described the practices third- and fourth-grade teachers perceived to contribute to improving the reading proficiency of Massachusetts elementary students. The research question that guided the study was the following: What do third- and fourth-grade teachers perceive as practices they use that contribute to improving the reading proficiency of Massachusetts elementary students? Chapter 4 is organized into sections that begin with a description of the processes used to establish the results of the study, including a description of the setting and participant demographics, the steps of the data collection process, and a detailed description of the data analysis process. Next, I present the evidence of the study's trustworthiness and results and conclude with a chapter summary.

Setting

The data for this basic qualitative study were collected using semistructured interviews conducted using a video-conferencing platform or phone call. Three teachers requested that they complete the interview face-to-face using video conferencing. Each face-to-face interview provided privacy and participant comfort and was free from interruption. Five teachers requested a phone conference. I conducted each phone conference in a space that provided privacy and was free from interruptions. No personal or organizational conditions influenced the participants in their experience at the time of

the study. Time was given for introductions, and the interview process began once the participants appeared relaxed and ready to participate.

Demographics

A total of 14 third- and fourth-grade teachers from schools across Massachusetts agreed to participate in the study. However, two participants did not meet the criteria for the study. The selection criteria for participants included (a) must be current third or fourth-grade teachers who teach reading in the state of Massachusetts, (b) have taught reading for at least 1 year in the state of Massachusetts, and (c) teach at a school that is demonstrating growth in reading as reported by state reading assessments. Two of the 12 participants who were eligible to participate did not respond to the invitation. Two participants consented but could not be reached to schedule an interview. A total of eight participants from public schools across Massachusetts were included in this study. All eight participants taught reading to third- or fourth-grade students in their schools, all participants had over 1 year of experience teaching reading, and all participants taught at a school that demonstrated reading proficiency as reported by state reading assessments. Therefore, all participants met the study's selection criteria (see Table 2).

Table 2

Participant Demographics

Participant	Teach reading?	Grade level	Experience (years)	Reading proficiency?
P1	Yes	3	17	Yes
P2	Yes	3	11	Yes
P3	Yes	4	19	Yes
P4	Yes	4	19	Yes
P5	Yes	4	14	Yes
P6	Yes	3	2	Yes
P7	Yes	3/4	38	Yes
P8	Yes	2–5	10	Yes

Data Collection

The original plan presented in Chapter 3 was to recruit participants by first gaining permission from school administrators. Once granted permission, I would use the participants' school district email addresses provided by the administration to invite participants to participate in the study. If I did not obtain the minimum number of participants I wanted, I would use snowball sampling to obtain additional participants. From February 2023 through October 2023, I contacted superintendents and principals from schools demonstrating growth in reading as reported by state reading assessments. I first called the Massachusetts Department of Elementary and Secondary Education, Office of Planning and Research. I was directed to contact the districts and schools directly for permission to recruit participants. I reached out to the top-performing schools across the state of Massachusetts. In my attempt to recruit participants, I discovered that literacy research in Massachusetts is a significant focus within the state, and schools are continually inundated with research participation at the state level.

Because many schools were participating in state-based studies, several principals were unwilling to allow their teachers to be interviewed for my study to not overwhelm

them. Several principals were interested in receiving information but never responded to my calls or emails after receiving the requested information. Because I had difficulty obtaining participants, I submitted a request to the institutional review board to amend my recruiting procedures to include using publicly available email addresses and social media platforms. The institutional review board approval was granted, so I began recruiting using the amended procedures in May 2023. I emailed the teachers from the approved partner school, who agreed to send my email to help recruit participants. The teachers were sent a link to a Google Form to fill out if they were interested in participating in the study. I also began to look for Massachusetts teacher groups on social media sites where I could post my study information to recruit participants. I was able to post on five sites specific to Massachusetts teachers and teachers of reading in Massachusetts. I continued to have difficulty obtaining participants, so I revised recruiting procedures to include a monetary gift of a $20 Amazon gift card for participation.

If a Google Form was filled out, I screened the volunteers to determine whether they met the study's inclusion criteria. Everyone who filled out the Google Form received a response using the contact information provided. If they met the criteria, I informed them of their participation eligibility and emailed a consent form. If they did not meet the criteria for the study, they were sent an email indicating why they did not meet the criteria and were thanked for their willingness to participate. Once I received the email consent from the volunteers, interviews were scheduled at a convenient time and preference of interview type (video or phone) for each participant.

The semistructured interviews consisted of seven predetermined open-ended questions to explore the practices of teachers whereby a consistent pattern of excellence in reading proficiency had been demonstrated. I recorded all interviews between May and August of 2023. Three interviews were conducted using a video-conferencing platform, and five were conducted via phone. I also used my laptop and phone to record the interview. Two sources of the recorded interview provided a backup if one of the recordings failed. The interviews took place in a setting free from distractions, and each interview lasted between 30 and 55 minutes. I established a positive relationship with each participant throughout the interview to build trust. To lessen the potential of an imbalance of power, I told the participants that their participation was ongoing and voluntary and that they could withdraw at any time without experiencing any penalties. During the interview, I used the interview protocol to guide the interview. I also took handwritten and typed notes to ask follow-up or clarifying questions for participants to elaborate on their responses and to gather additional information. Sometimes I developed additional questions or reordered the questions based on the participants' responses and the direction of the interview.

Following each interview, I thanked the participant for taking the time to interview with me and for sharing their experiences in what they perceive as the practices that may contribute to their students' reading success. I assured each participant that their information related to the study would remain confidential. I provided my contact information in case there was a need to clarify information or ask additional questions

and conduct member checking. I followed up each interview with an appreciation email and sent each participant a $20 Amazon gift card.

Data Analysis

The data in this basic qualitative study were analyzed through Braun and Clarke's (2006) thematic analysis method to develop a rich and detailed account of the data. The first phase was to familiarize myself with the data. Upon completion of conducting each interview, I familiarized myself with the data by transcribing each interview verbatim using the transcription feature in Microsoft Word. I listened to the audio recordings several times to amend what the transcription feature did not pick up correctly to create an accurate transcription. Then I produced a clean copy of the transcription to make it easier to read and analyze. Once the interviews were transcribed, I presented the data transcripts to the participants for their feedback. One correction had to be made regarding the number of instructional coaches at Participant 2's school. After transcribing each interview, I engaged in critical reflection throughout the research process by keeping a personal journal to record my thoughts and feelings, including documenting my relationship with the data. I also read the interviews several times to familiarize myself with the data.

The second phase of thematic analysis involved generating initial codes across the data set and organizing the data relevant to each code. As I engaged with the data, I used open coding to break down the data into segments. I worked through the entire data set, reading line by line to highlight words or phrases relevant to the study. After working through the data, I coded the highlighted sections for as many patterns as possible and

recorded the codes in an Excel codebook. I repeated this process several times. As I reflected on the patterns embedded in the data, I developed categories from the codes and identified emerging themes. Themes were developed that were specific to understanding the practices of third- and fourth-grade teachers in Massachusetts elementary schools that may contribute to improving student reading proficiency. Table 3 displays the theme development for the study.

Table 3

Theme Development

Category	Theme	Subtheme
Professional culture Classroom environment Reading environment	Teachers believe the culture and the environment of the school and classrooms are important contributors to reading success.	
Systematic evaluation Instructional support system Understanding state standards Characteristics of teacher practice	Teachers report an institutional focus on collaboration and reflection.	
Understanding state standards Curriculum Curriculum framework	Teachers need a depth of understanding of curriculum and state standards.	
Assessing student learning	Assessment focuses on improving student learning.	Formal Informal
Student engagement Instruction Collaborative learning	Instruction must be purposeful and multifaceted.	Instruction should be differentiated. Specific instructional practices that support student learning and contribute to student success. Specific instructional approaches that support student learning and contribute to student success.

The themes that emerged from the data were (a) teachers believe the culture and the environment of the school and classrooms are important contributors to reading success, (b) teachers report an institutional focus on collaboration and reflection, (c) teachers need a depth of understanding of curriculum and state standards, (d) assessment focuses on improving student learning, and (e) instruction must be purposeful and multifaceted. The results gathered from the eight interviews are presented in the next section and organized into the five themes that emerged from the data.

S. M. Ravitch and Carl (2016) proposed that discrepant cases should challenge the researcher to ask what can be learned from this outlier. I considered all responses and thoroughly examined the data to determine whether recoding data was necessary. One case emerged from the data that deviated from the other responses and was considered discrepant. Participant 8 was a special education teacher who was adamant with her administration that her students could learn to read, but she was not supported and felt isolated. She went above and beyond to find the support she needed for her students to be successful. She mentioned that the general education teachers used a higher quality curriculum than the special education department. When asked how her administration supported her in making a change if needed, she stated, “I did not find that they were, or that they even noticed that it was a problem. My experience was that they didn’t discuss with me the lack of progress as being anything but what was expected.” She further described her administrators as believing that her students could not achieve any level of reading proficiency. In contrast, the other seven participants shared their administrators’

support in sharing their student concerns, even among students receiving special education services.

Evidence of Trustworthiness

Credibility

Credibility ensures validity through its research design, research instruments, and tools by seeking real-life complexities through intentional site selection and sampling strategies that provide an authentic interpretation of the phenomenon through its research design (S. M. Ravitch & Carl, 2016). To ensure credibility, researchers must present the accurate description of the phenomenon being studied instead of what they want the data to say. Credibility is achieved by reexamining initial findings and analysis by engaging in alternative themes, patterns, and possible explanations (Patton, 2015; Shenton, 2004).

Credibility in this basic qualitative study was ensured by conducting member checking. To conduct member checking, I emailed each participant a document of my restated or summarized responses collected during their interview process to verify that my written responses accurately represented the interview. Only one participant provided clarifying information to their transcript. Verifying the data helped ensure that they were not compromised by researcher bias (see Creswell, 2007; see Lincoln & Guba, 1985). There were adjustments to the credibility strategies. Due to the lack of participation, I could not triangulate the data across five regions within Massachusetts.

Transferability

Another criterion to ensure trustworthiness is transferability. Transferability refers to the applicability of the study and involves thick descriptions to allow the reader to

determine whether the findings can be applied to and replicated in their setting (Merriam & Tisdell, 2016; Shenton, 2004). Transferability in the current study was obtained by providing a thick description of the phenomenon along with how my study took place.

Dependability

Dependability strategies improve a study's trustworthiness by establishing that the study's findings are accurate, consistent, and repeatable. Additionally, if changes occur during the data collection process, they are acknowledged and clearly documented (Burkholder et al., 2016; Shenton, 2004). Further, dependability is demonstrated by providing a rationale for the methods used in collecting the data related to the study's concept (Burkholder et al., 2016; S. M. Ravitch & Carl, 2016). Dependability in this study was achieved by clearly presenting a detailed account of the research and data collection process and how the data were analyzed. Specifically, the detailed account included a description of (a) the specific purpose, (b) how and why the participants were selected, (c) how the data were collected, and (d) how the data were analyzed and interpreted.

Confirmability

Confirmability demonstrates that the findings of a qualitative study maintain objectivity, avoid researcher bias, and can be confirmed through the data by others (Burkholder et al., 2016; Shenton, 2004). It is important for the researcher to understand their role and how their prior experiences and beliefs may influence the research process (Burkholder et al., 2016; S. M. Ravitch & Carl, 2016). Researcher reflexivity is one way to address the researcher's potential influence on the research process (Burkholder et al.,

2016; S. M. Ravitch & Carl, 2016). To establish the confirmability of the study, I engaged in reflexivity by using field notes to actively examine any personal biases that may have impacted the research outcomes. Reflexivity was achieved by being transparent about my background and its potential impact on data analysis.

Further reflexivity was achieved by providing details of the data collection process, data analysis, and interpretation of the data, providing a rationale and explanation of the decisions made in the research process. Throughout the reflexive process, I examined my judgments, practices, and beliefs that may have incidentally affected the research during the data collection process. To further establish confirmability, I used an audit trail. According to Merriam (2009), "an audit trail, in a qualitative study, describes in detail how data were collected, how categories were derived, and how decisions were made throughout the inquiry" (p. 223). Further, the audit trail consisted of field notes about my decisions and processes throughout the data collection process (see Burkholder et al., 2016). I kept an audit trail to assist in helping me to think critically about the decisions being made and to be transparent about how I collected and analyzed the data.

Results

The results of the study revealed five themes from the data analysis that aligned with the research question and provided an understanding of the patterns of practice Massachusetts third and fourth-grade teachers use that contribute to improving the reading proficiency of Massachusetts elementary students. The following research question informed the study. What do third and fourth-grade teachers perceive as

practices they use that contribute to improving the reading proficiency of Massachusetts elementary students?

The five themes that emerged from the data were (a) teachers believe the culture and the environment of the school and classrooms are important contributors to reading success, (b) teachers report an institutional focus on collaboration and reflection, (c) teachers need a depth of understanding of curriculum and state standards, (d) assessment focuses on improving student learning, and (e) instruction must be purposeful and multifaceted. Each theme supported data from participant interviews that described practices perceived by third and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students.

Theme 1

Teachers believe the culture and the environment of the school and classrooms are important contributors to reading success. This theme contains the categories of professional culture, classroom environment, and reading environment. Seventy-five percent of participating teachers communicated that regular collaborative meetings are common. During collaborative meetings, teachers discuss what is needed to support their students' learning and how they can adapt their instruction to improve student learning outcomes. Participant 1 emphasized the benefit of designing a learning environment that meets all students' diverse needs by "giving every student a voice at the level they're comfortable with." Over half of participant responses also indicated the importance of teacher autonomy in building trust and respect to create an environment that leads to open and productive conversations about how to best support their students. Participant 4

shared, “They trust you. They give you freedom for the most part, they trust you … I think that’s really something valuable here because it makes teachers invested when you can feel like you own the curriculum some.” Another significant contributor to reading success, reported by 63% of participants, was the culture of success within the school environment. Participant 1 conveyed that their school has pride in being uniquely high performing, knowing that what they do is helping students improve their reading proficiency. Massachusetts’s reading success was also described as a cultural concept. Three participants shared that Massachusetts is proud of its longstanding success in education and desires to remain a leader in education.

Higher education also influences the Massachusetts education system. Educators earn advanced degrees, develop education programs, design, and implement research studies in Massachusetts, and develop curriculum. In promoting a culture of higher education, Participant 5 mentioned that his daughter’s school and the school where he teaches continually promote higher education in reputable Massachusetts colleges and universities. A college influence, even at the elementary level, contributes to this culture of success. Participant 6 noted that in her reading specialist degree program, her professors are heavily involved in continuing reading research, designing professional development, or other opportunities. Participant 4 described Massachusetts’s reading success as the influence of the college level. She mentioned a concentration of educators and researchers in the state designing education programs, running studies, working in the schools, and working on curriculum. She also noted the trickling effect this has on the

school system in Massachusetts. Having a college influence, even at the elementary levels, contributes to this culture of success.

Creating a supportive learning environment for students through expectations has been demonstrated to be a contributing factor to improving a student's school success. Six of the eight participants agreed that the individual classroom environment significantly impacts reading success. Five participants expressed the importance of putting expectations for behavior, work, and reading into place, laying the foundation for developing strategies that lead to student success. Participant 4 commented, "I think that it's really important to have high expectations for your kids. That's one of my beliefs personally. So many times, I've seen it, that the more you expect of kids, if you give them a strategy for success, they will rise to that." Sixty-three percent of the participants emphasized the importance of classroom behavior management and agreed that setting high achievable expectations is necessary to create an environment conducive to learning.

In responses included in this theme, 63% of the participants clearly expressed that creating a reading environment that develops a love of reading in the classroom contributes to their student's reading success. Participant 2 reported that giving students something to love about reading increases their interest and love of reading. Seventy-five percent of participants emphasized providing exposure to grade-level texts to keep students actively engaged in reading, even for struggling readers. Three participants shared how access to grade-level texts and being expected to do the same thinking as their peers have supported their struggling readers. The three participants also noted that their struggling readers feel respected and honored when they use grade-level text, which

builds their sense of community. Thirty-eight percent of participants agreed that being passionate about teaching reading contributes to creating an environment that promotes reading. Students will only get as excited about reading as their teachers. Seeing the act of reading was another factor in building a community of readers, which three participants communicated. Participant 8 noted that her students have not experienced reading for pleasure, which she believed limits their development as readers. Three of the eight participants who reported that providing all students access to grade-level text benefitted their students, agreed that it benefitted their teaching because they could be invested and have deep conversations about the text.

In responses included in this theme, participants agreed that creating an environment that encourages kids to read promotes a love of reading. All teachers report an attitude of constant reflection, asking themselves what is working and what may need to be changed. Those structures are supported as a whole and demonstrated in that the entire district is willing to reevaluate the curriculum. The schools support the teachers from the leadership down to the classroom. Successful schools in Massachusetts have a broader focus than an individual teacher who is doing what is best for their students in any individual school across the country. It is an institutional focus in that the district, or the entire school, reflects on what they are doing, what they can do better, and how they can do better.

Theme 2

Teachers report an institutional focus on collaboration and reflection. This theme contains the categories systematic evaluation, instructional support system, understanding

state standards, and characteristics of teacher practice. Four of the eight participants report the importance of collaboration and reflection at a district, school, and classroom level. All participants were from schools considered high performing based on Massachusetts state assessments. However, administration from 38% of the participants' schools recognized the need to make curriculum changes to improve student reading outcomes. Participant 3 shared her district's plans to switch their reading curriculum to align with the current science of reading research. Participant 3 further described her administration's reflective nature and shared, "Our curriculum coordinator is great. She recognizes that we need more … We would get this data that they weren't fluent, and then teachers would all create different things or find different things … We need everybody doing the same things." Participant 6 also reported her role on the literacy leadership team in developing a new curriculum that considers best practices for teaching all students to read. All participants reported a level of constant reevaluation of what is working and what is not working to reflect on best practices in providing instruction that supports student learning and growth.

All participants agreed that having an instructional support system from administration, instructional coaches, or reading specialists significantly improved their instructional practice. Participant 1 described this support as a significant contributor to their school's success. Participant 2 shared, "I think without that support, it would be very hard to do what we do. I think having the coaches' support is incredibly important, not only as in accountability, someone's holding me accountable … but they're also behind the scenes." In the responses included in this theme, 50% of the teachers also

shared that they work collaboratively with other colleagues and acknowledged the impact of sharing ideas on supporting their students. Four of the eight participants reported sharing their students' work and critiquing it together, looking for trends. Each of the four participants shared that the collaboration component between staff is important to improving their practice because many heads are better than one, and they learn more from each other. The accessibility to instructional coaches and the collaborative relationship with school leaders and staff have created an environment to develop and sustain teachers in their practice.

Massachusetts provides an instructional framework based on state standards for teachers to use and adjust based on their students' needs. Five teachers noted that reflection on state standards develops the preparation and guidance necessary to provide students with instruction that supports successful reading outcomes. A unique aspect of 50% of the participants' schools is that they do not have a set, scripted curriculum that teachers are required to use for instruction; they have instructional coaches who reflect on state standards and assessments to design their instructional guide for the school year. Although Participant 7 acknowledged her school's use of standards in framing instruction, she reported that the standards are extremely high and not necessarily developmentally appropriate. However, Participant 7 reported that as students move from third to fourth grade, they become more independent and developmentally mature and can handle the standards differently than in third grade. Understanding the state's standards guides teachers in designing their instruction.

Collaboration and reflection have given teachers opportunities to share effective instructional practices and strategies to support student learning and create a supportive learning environment. Seven of the eight participants identified characteristics of teacher practice contributing to an institutional focus of collaboration and reflection that supported student learning. Those practices included continual learning, extra effort, the teacher's why, personal experience, teacher reflection, initiative, style, commitment, and creativity. The top characteristics mentioned among the participants included teacher reflection, teacher initiative and personal experience, continual learning, and teacher creativity. Fifty-seven percent of the teachers exemplified teacher reflection as a practice that demonstrated they were cognizant of how their instructional practices could be improved to meet the needs of their students. Participant 6 noted her critical reflection on their current reading program and making changes to implement it with fidelity. Forty-three percent of participants displayed teacher initiative and personal experience as characteristics of teacher practice. Participant 8 noted her initiative to investigate current reading research. She shared that she did not have administrative or colleague support to provide a reading curriculum that would meet her students' needs, so she took the initiative to find what would help her students make progress toward their learning goals. She noted, "If I didn't go off and do it, then it wasn't going to happen." Personal experience has also shaped teachers' practice. Participant 5 commented, "I think of my daughter, she's around 10 years old, and my wife used to read with her all the time when she was an infant … and now she just loves, loves books. You have to literally tear the book away from her; she even walks and reads … the more you read, the better you get at

it." Similarly, Participant 8 shared a personal experience that defined her why in becoming a teacher. She recalled the struggle she had in getting her son reading support. She knew something was wrong but did not have the language for it.

Continual learning and teacher creativity accounted for 29% of the characteristics exhibited by the participants. Teachers in this category demonstrated a desire to continue their learning to meet the demands of the ever-changing needs of their students. Participant 6 shared,

> All the professors I've gotten the chance to work with have done a ton of research, are super educated, and know a lot about the field … It feels like everyone in Massachusetts is always on the brink of some new research and always continuing to learn.

Likewise, Participant 8 commented, "I was free to make that commitment to go and do that kind of research." Participant 3 noted how she uses her creativity to create student engagement, "We do a ton of projects, so every unit that we do, I end with some sort of project, and the kids get really enthusiastic." Looking back and constantly evaluating their practices helps teachers improve their instruction and shape their students' learning.

Continuing to reflect and innovate their teaching practices through a collaborative environment has provided teachers with meaningful feedback to evaluate and improve their instruction. Likewise, having a collaborative environment has allowed teachers to celebrate successes and provide them with a safe place to ask for additional support.

Theme 3

Teachers need a depth of understanding of curriculum and state standards. This theme contains the categories of understanding state standards, curriculum, and curriculum framework. Understanding state standards helps schools develop their curriculum. Six of the eight teachers shared that understanding state standards is a significant focus of their school's instructional model. Participant 1 shared, "I think a lot of our success comes from understanding what the standards say and how the standards are assessed. You have to know them really deeply, really well. And if you don't, you need someone who does." Participant 2 also expressed the importance of balancing standards and assessment because doing one without the other either loses the instructional rigor or your instruction is teaching to a test. She noted that both provide an understanding of what students should know and how the teacher can help them achieve that knowledge. Five of the eight participants agreed that knowing state standards provides a foundation for their reading instructional framework.

The standards define what students are expected to know and do; however, they do not prescribe how teachers should teach. In Massachusetts, teachers, curriculum developers, and instructional coaches are given the choice to create a curriculum framework that provides all students access to the standards and provides appropriate accommodations for all students to participate in their learning. Within the curriculum framework category, three participants incorporated some type of modification to the curriculum to allow students access to grade-level standards. Those participants reported that they are given flexibility in developing their framework to meet students' needs.

Fifty percent of participants also reported that their reading and writing programs are closely related, and one supports the other.

Massachusetts learning standards are designed on standards-based instruction. Providing teachers with autonomy to choose a curriculum that best meets their students' needs has assisted teachers in implementing rigorous instruction with measurable outcomes. Six out of eight participants reported that they are not bound to one particular curricular program but are given the autonomy to make decisions based on lesson topics and student needs. However, Participant 8 reported that she did not find her administration supportive or even aware of what she was teaching. Her students' lack of progress was expected based on their placement in special education. Participant 8 is discussed more in discrepant cases. Four participants shared specifically about their school's focus on, or change toward, a structured literacy approach to instruction based on current reading research in the science of reading. The other four participants use a supplemental curriculum, *i-Ready*, that provides explicit and systematic instruction based on the science of reading research. Four out of eight participants are from schools where the literacy block comprises reading, writing, and word study. However, the four participants reported that word study is not taught during the designated time and is considered a flexible block to support students struggling with a particular reading or writing skill. Three of the remaining four participants shared similar experiences of how their word study block is not used as a time specific for spelling but to provide additional phonics support, reinforcing their students' spelling ability. Six participants shared the importance of connecting reading and writing across various genres to practice their

focused skills. Participants reported that connecting the reading and writing pieces increased student engagement and student understanding of the purpose of their reading.

When administrators and teachers have a thorough understanding of their curriculum and state standards, they can design a framework that ensures alignment of the state standards with the school's curriculum. Aligned standards-based units of instruction provided measurable outcomes that have improved student performance. Further, when teachers understand how the standards build upon each other, they can create a focused lesson using the curriculum to provide a way to involve the students and apply their learning. Understanding the curriculum and state standards allows teachers to be intentional about their instruction to support student learning based on skills they should know.

Theme 4

Assessment focuses on improving student learning. This theme is broken into two subthemes, formal and informal, and the main category related to this theme is assessing student learning. Seven participants shared how assessing student learning is a significant factor in shaping their instruction to improve student learning. Participants explained that assessing student learning provides the opportunity for the teacher to critically reflect on their teaching, and all seven participants shared similar stories of how they are constantly assessing their instruction. Participant 1 noted, "If I'm in the middle of a lesson and it's not working, we're going to stop and do something more productive until I know how to fix this." In responses included in this theme, 75% of the participants clearly expressed the collaborative role regular data meetings have in analyzing data to give teachers an

understanding of where to focus their instruction and inform student groupings. As they analyzed the data, five of the eight participants shared that during the process, they noticed trends in student learning, which provides awareness of where teachers may need to make changes to their instruction or student groupings. All participants shared that assessment is achieved through various modes, including formal and informal types of assessment.

Formal

Using data from formal assessments has supported teachers in acting on the data to improve their instruction and ensure that learning is relevant for each student. Seven participants reported using formal assessments to design and implement effective instruction into their teaching practice. In responses included in this theme, 88% of the participants clearly expressed that they use the diagnostic information from the assessments to regularly group students according to their level of need. Assessment data is analyzed from state assessments, diagnostic assessments, and district benchmarks. Data-driven instruction is an important component of all the participants' schools, and assessments are used at the start of the year to obtain an accurate starting point of students' reading strengths and weaknesses. Assessments are also administered several times throughout the school year to determine instructional groupings to provide students with the most appropriate level of support. Fifty percent of the participants noted that their instructional coach uses a combination of state standards, state assessments, and end-of-the-year assessments to provide a curriculum guide for instruction. Keeping data

at the forefront of their instruction helps teachers make informed decisions that benefit student outcomes.

Informal

All participants reported that assessment is always happening in some form, whether through active student observation, immediate teacher feedback, reading conferences, end-of-unit assessments, fluency checks, progress monitoring, or student work. Informal assessments identify students' strengths and weaknesses and guide the next steps for instruction. Seven participants shared that being an active observer of student learning allows the teacher to adjust in the moment and guide students to achieve the learning outcome. Four participants also shared that they use non-standardized computerized assessments as part of their students' independent work to provide additional explicit instruction based on a student's individual needs to personalize student instruction. An intentional assessment of student learning provides the teachers with useful information to know if the students are meeting the learning objective.

Using some type of assessment to understand and improve student learning drives the instruction from all the participant's schools. Teachers analyze student work for patterns of error and mastery. As the participants reported, doing so helps them make informed decisions connecting assessment to instruction.

Theme 5

Instruction must be purposeful and multifaceted. Included in this theme are the categories differentiated instruction, student engagement, instruction, and collaborative learning. This theme is broken down into three subthemes: instruction should be

differentiated, specific instructional practices that support student learning and success, and specific instructional approaches that support student learning and contribute to student success. Seven participants shared several examples of providing students with purposeful and multifaceted instruction to activate student learning and allow them to make meaning and apply their learning to real-world contexts. Sixty-three percent of participants reported creating an environment that promoted active student participation to foster deeper level thinking. Six participants also reported that building a strong sense of community resulted in higher levels of student engagement. Collaborative learning is another purposeful type of instruction. Fifty percent of participants shared examples of engaging students in cooperative learning activities to maximize learning and build on student strengths.

Instruction Should Be Differentiated

Differentiated instruction allows all students to receive equitable access to grade-level instruction and is adapted to meet a student's individual needs to support student learning. All participants reported using some type of differentiation during their reading instruction, and six participants described using differentiation regularly depending on a student's need during the lesson. All participants shared that differentiated instruction during reading instruction may include center-based activities to practice foundational reading skills, teacher-led small groups for instruction and practice, support for accessing text, teacher-guided access, re-reading, teacher read-aloud, audiobooks, breaking down a skill, sentence frames, checklists, pre-teaching vocabulary, teacher modeling, chunking text, or reframing questions. One participant noted that teachers often think of

differentiation in terms of students who are struggling; however, it should be inclusive of all students, including those who are excelling. Meeting the needs of all students so they can access the curriculum is the purpose of differentiation.

Instructional Practices That Support Student Learning and Contribute to Student Success

Facilitating a collaborative student learning environment has assisted teachers in developing their students' learning experiences to make learning relevant and engaging. Three participants emphasized the importance of creating a collaborative environment that builds student engagement, supports learning, and develops a love for reading. Creating a collaborative learning environment allows students to build communication and social skills while learning academic content. Participant 1 noted that collaboration is good for all involved because sharing ideas with others activates deep thinking. Participant 2 shared several examples of how collaboration supports her students' learning and contributes to their success. She shared the importance of having classroom conversations for students to understand how their classmates think, which allows students to learn from each other and increases student engagement. Participant 7 also emphasized that developing listening skills in collaborative discussions allows her students to build on responding to their classmates' conversations by connecting their thinking. Students also learn to ask questions for clarification and further explanation. Seventy-five percent of participants also explained the importance of student engagement in supporting student learning, saying it is difficult for learning to occur without engagement. Six participants shared that they engaged their students through active

participation (i.e., co-construction writing, book talks), book selection, explicit instruction that builds reading skills, and multimedia tools. Scaffolding is another practice that supports a student's understanding of the content. Three participants shared that scaffolding is built into their teaching practice for each new concept they teach. Scaffolding provides instructional support while students develop a stronger understanding and greater independence in learning. Participants 1 and 2 explained that they use a gradual release model by modeling the lesson using a think-aloud procedure, providing guided support, and releasing them to work independently as students demonstrate an understanding of the skill.

Instructional Approaches That Support Student Learning and Contribute to Student Success

The instructional approaches identified in this study include direct instruction, explicit instruction, and structured literacy. All participants described using at least one of the named instructional approaches to support student learning. Four participants shared examples of using a direct instruction approach when introducing new skills and concepts to provide students with knowledge of skills and strategies. Participant 2 reported the need for direct instruction in reading skills because you cannot assume that students will figure out the skill on their own. Demonstrating and modeling a skill was the primary method of direct instruction for 50% of the participants. Three participants described their use of explicit instruction as an approach that contributes to their students' success. All teachers who used explicit instruction reported breaking down a larger reading skill into smaller parts and providing continual checks for student understanding. In doing so,

all three of those teachers reported that their students demonstrated a more thorough understanding of the skill and were more engaged and actively participated in their learning. Fifty percent of the participants mentioned the benefit a structured literacy approach to teaching reading has on their students' reading progress. Participant 6 described her experience as "light bulb moments" as she observed her students making the connection in learning how to read, which increased their engagement and motivation to apply what they were learning to what they were reading. She stated, "I definitely think the structured literacy way of teaching reading has made a huge difference in the way that they're learning how to read." All participants described using one or a combination of instructional approaches, direct instruction, explicit instruction, or structured literacy, to engage their students in achieving their learning goals.

Participants indicated that purposeful and multifaceted instruction engages students and accommodates diverse learning styles, needs, and interests. This type of instruction creates an intentional learning environment that supports all students in achieving high standards, producing quality work, and encouraging students to be active participants in their learning.

Summary

Chapter 4 began with a description of the data analysis process. A review of the data analysis results revealed five themes that may contribute to improving the reading proficiency of Massachusetts elementary students. These themes supported the conceptual framework for the study and provided an answer to the research question for the study. The five themes were (a) teachers believe the culture and the environment of

the school and classrooms are important contributors to reading success, (b) teachers report an institutional focus on collaboration and reflection, (c) teachers need a depth of understanding of curriculum and state standards, (d) assessment focuses on improving student learning, and (e) instruction must be purposeful and multifaceted. Each theme supported data from participant interviews that described practices perceived by third and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. In Chapter 5, I will present an interpretation of the findings. In addition, I will discuss the limitations of the study and provide recommendations and implications for further research on practices perceived by teachers to improve reading proficiency.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this basic qualitative study was to describe the practices perceived by third- and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. I sought to understand the phenomenon of third- and fourth-grade teachers' practices to improve the reading proficiency of Massachusetts elementary students. The basic qualitative design allowed me to describe and make meaning of the complex phenomenon of understanding the practices used by third- and fourth-grade teachers that they perceive to improve the reading proficiency in Massachusetts elementary students (see S. M. Ravitch & Carl, 2016).

The study was conducted to fill a gap in the literature by focusing on the practices implemented by teachers at top-ranking schools. According to the 2022 NAEP testing, 68% of fourth-grade public school students in the United States performed below the NAEP proficient level on the 2022 reading assessment, and 32% of fourth-grade public school students performed at or above the proficient level (NCES, 2022). Based on this analysis of test scores, millions of students in the United States cannot read proficiently. Since 2005, Massachusetts schools have demonstrated a consistent pattern of excellence in reading proficiency, as demonstrated in state-mandated reading tests (NCES, 2022). Understanding Massachusetts elementary schools' patterns of practice could provide insight for other schools in their efforts to improve student reading proficiency.

The key findings of the current study were five themes that emerged from the data analysis to answer the research question. The emerging themes were (a) teachers believe the culture and the environment of the school and classrooms are important contributors

to reading success, (b) teachers report an institutional focus on collaboration and reflection, (c) teachers need a depth of understanding of curriculum and state standards, (d) assessment focuses on improving student learning, and (e) instruction must be purposeful and multifaceted. The present study may contribute to addressing the gap in understanding the patterns of practice of teachers in Massachusetts schools where they have demonstrated a consistent pattern of excellence in reading proficiency.

Interpretation of the Findings

Initially, I intended to explore teachers' pedagogical practices, but what teachers described that led to their success was much greater than instructional choices. Based on the data analysis, I was able to confirm and extend knowledge in the discipline by comparing it with what had been found in the peer-reviewed literature reviewed in Chapter 2.

Literature Related to the Findings

The literature review established that researchers had shown that reading is a complex process and that not every student learns to read in the same way (Burns, 2017; Compton-Lilly et al., 2020). However, most students can learn to read, provided they are given the opportunity to do so (EAB, 2019; Moats, 2020; Snow, 2021). Recent research on reading focused on reading practices, the science of reading, pedagogical knowledge, and student-specific supports and the impact each contributes to student reading outcomes. However, despite this level of understanding and knowledge base, there was limited focus on the practices of Massachusetts third- and fourth-grade teachers and their potential impact on their reading proficiency progress.

Teachers Believe the Culture and the Environment of the School and Classrooms Are Important Contributors to Reading Success

Pedagogical knowledge is an important component of implementing effective reading instruction; however, teachers can feel restricted from being able to teach reading in a way that makes learning relevant for all students. M. Vaughn (2019) suggested protecting teacher autonomy of their reading instruction as it relates to providing student-specific support for their students instead of mandating fidelity to a mandated literacy program. To navigate the complexity of the classroom, recognizing and promoting teachers' ability to adapt their instruction despite restrictive policies is an important component in providing an equitable learning environment for all students (Förster et al., 2018; Parsons et al., 2018; M. Vaughn, 2019). Results from the current study indicated that teachers believed that teacher autonomy was an important part in building a culture of trust and respect within the school environment. Having a culture of trust and respect was valuable in making teachers feel invested in their practice and in their school. Furthermore, 75% of the teachers who participated communicated that regular collaborative meetings were common. During collaborative meetings, teachers discussed what was needed to support their students' learning and how they could adapt their instruction to improve student learning outcomes. Participant 1 emphasized the benefit of designing a learning environment that meets all students' diverse needs. Shanahan (2020) indicated that the reading reform discussion should include teacher input and experience, making sure that their voice is heard and represented. D. Ravitch (2016), one of the foremost authorities on education in the United States, also agreed, indicating that their

observation of the educator's perspective was a key factor in their perspective of school reform being completely transformed. D. Ravitch characterized teachers as having reform fatigue, lack of support, or confidence in reform. D. Ravitch described the doubt educators had in the latest and greatest reading fixes of the day, but because they were bound to follow reform based on local and federal mandates, they reluctantly followed. For true school reform initiatives, teacher voice should be considered to have valuable input.

Furthermore, research in education plays a vital role in improving learning outcomes for students and should not be overlooked in the reading reform effort. Kilpatrick (2015), a reading researcher specializing in reading development and reading difficulties, identified a gap between research and practice. Kilpatrick argued that the gap is due to a lack of awareness of reading research among educational professionals, distrust of the scientific study of reading, and the perpetual reading wars that limit open discussion about current reading research on literacy development and reading difficulties. Results from the current study revealed that having a culture of higher education for both teachers and students contributes to a culture of success. Educators earning advanced degrees are developing curriculum and education programs and designing research studies for their schools and the state, promoting their pride in their longstanding success in education and their desire to remain a leader in education.

Teachers Report an Institutional Focus on Collaboration and Reflection

The debate of how to best teach reading has existed for decades, leaving educators unsure of what works in teaching students to read. Becoming a fluent and skillful reader

is important to a student's academic success. However, despite the need to improve reading proficiency, the decline and stagnant growth of students' basic reading skills have created a reading gap in practice and performance. Compton-Lilly et al. (2020) argued that the media misguides and misinforms the public about the multidimensional nature of reading instruction to package and sell a solution mandated by government officials. Accountability is an integral part of education reform. D. Ravitch (2019) suggested an increased accountability of district leadership and elected officials to address the concern of underperforming schools. D. Ravitch argued that pedagogical territory should be left to educational professionals rather than elected officials.

To improve the nation's schools, D. Ravitch (2016) suggested the following (a) stop the continual school reorganization of structure and management, (b) improve curriculum and instruction and the conditions in which teachers work and students learn, (c) discontinue relying on tests to decide the future of schools, and (d) end the incessant focus on data that changes the purpose of education. All students deserve the best education possible; disregarding the essential purpose of education may create a lost opportunity. The findings of the current qualitative research revealed that four participants shared that they do not have a set, scripted curriculum that teachers are required to use for instruction; they have instructional coaches who reflect on state standards and assessments to design their instructional guide for the school year. Further, six participants reported that they are not bound to one curricular program but are given the autonomy to make decisions based on lesson topics and student needs.

Findings also showed that administration from three of the participants' schools recognized the need to improve curriculum and instruction. All participants reported constant reevaluation of what is and is not working to reflect best practices in providing instruction that supports student learning and growth. The participants reporting that their schools were making curriculum changes noted that their district planned to switch their reading curriculum to align with the current science of reading research. The science of reading perspective posits that scientific research has created a knowledge base to help schools make informed decisions regarding reading, reading development, and best practices for reading instruction based on student needs (Petscher et al., 2020; SCORE, 2020; Seidenberg et al., 2020). Evidence has shown that reading is a language-based activity and does not develop naturally (Compton-Lilly et al., 2020; SCORE, 2020; Walsh, 2020). Some researchers asserted that misconceptions about the science of reading have kept educators from using it to inform policy and practice (SCORE, 2020). Seidenberg et al. (2020) suggested that if the science of reading is to be effectively implemented into educational practice, it should be collaborative with experts across other disciplines, develop an understanding of instructional practices based on students' development, avoid limiting the discussion to a phonics-only approach, "invest in early learning" (p. 9), ensure all student learners are represented, and evaluate current curriculum and practices against how students learn. Converging the science of reading into practice acknowledges the complexity of teaching and may improve the quality of reading instruction for all students.

Teachers Need a Depth of Understanding of Curriculum and State Standards

According to the NBPTS (2016), teachers' knowledge of their students' reading development and the processes, skills, and strategies needed are necessary to increase students' reading progress. To develop students as readers, teachers need to recognize individual student needs and provide high-quality instruction to support their students' skills and further their reading development (NBPTS, 2016). Researchers have concluded that there are specific types of knowledge that are needed to teach reading effectively: (a) the psychology of reading and development, (b) knowledge of language structure and its application, (c) practical skills of instruction in a comprehensive reading program, and (d) assessment of classroom reading and writing skills (Clark et al., 2017; Moats, 2020; NBPTS, 2016; P. C. Snow, 2021; Tunmer & Hoover, 2019). Findings from the current qualitative study indicated that understanding state standards is a significant focus of the participants' school's instructional model. The standards define what students are expected to know and do; however, they do not prescribe how teachers should teach. In Massachusetts, teachers, curriculum developers, and instructional coaches are given the choice to create a curriculum framework that provides all students access to the standards and provide appropriate accommodations for all students to participate in their learning.

Teaching students how to read is a school's essential responsibility because it affects their success in other academic areas. Tunmer and Hoover (2019) maintained that effective reading teachers and specialists understand the cognitive processes required for reading and recommended using the cognitive foundations framework in developing instruction that addresses students' reading needs by supporting "critical thinking about

reading, its assessment, and its teaching" (p. 75). Teachers can provide more focused instruction when they understand their students' individual learning needs (Chew & Cerbin, 2021; Tunmer & Hoover, 2019). When teachers understand how the standards are built upon each other, they can create a focused lesson using the curriculum to provide a way to involve the students and apply their learning. Developing teachers' pedagogical knowledge of how to teach reading can help them understand the developmental needs of their students and provide interventions to address those needs.

Assessment Focuses on Improving Student Learning

Findings from the 2020 *Teacher Prep Review* suggested that literacy improvement continues by equipping teachers with proper assessment skills to make informative decisions regarding their students' reading progress (NCTQ, 2020b). Developing reading skills is integral to an elementary student's school career. However, meeting the diverse needs of all learners can make teaching reading challenging for teachers. Student-specific supports provide early identification and intervention to help struggling students succeed. One type of student-specific support is multitiered systems of support (MTSS). An MTSS is a framework that takes a proactive approach to assisting educators in identifying and providing support for students who are struggling in both academic and behavioral areas (Coyne et al., 2018; Regional Educational Service Agencies, n.d.). An MTSS framework includes (a) universal screening, (b) tiered intervention, (c) ongoing data collection and assessment, (d) schoolwide implementation, and (e) parent involvement (Regional Educational Service Agencies, n.d.). In reading, an MTSS framework identifies at-risk students to assist teachers in providing reading

intervention support (Regional Educational Service Agencies, n.d.). Implementing an MTSS framework can provide administrators and teachers with the necessary information to provide quality, targeted instruction for students that helps them reach their fullest potential (Coyne et al., 2018).

Using data to inform instruction is a continuous cycle of collecting and analyzing data results, such as tests and observations, and taking actionable steps for instructional practice to improve student learning (Chappuis et al., 2017). Tierney (2017) reiterated that using data is valuable to reading instruction because teachers can create fluid intervention groups and set goals to monitor student progress based on their areas of need. Teachers identify the student's problem, select an intervention to address the problem and decide how to monitor the intervention (Tierney, 2017). Using data is important to good teaching and has provided direction for teachers in identifying areas where students need additional support.

Seven participants in the current study shared how assessing student learning is a significant factor in shaping their instruction to improve student learning. Participants explained that assessing student learning allows the teacher to critically reflect on their teaching, and all seven participants shared similar stories of how they are constantly assessing their instruction. Seven of the eight participants expressed that they use the diagnostic information from the assessments to group students according to their level of need. Assessment data is analyzed from state assessments, diagnostic assessments, and district benchmarks. Data-driven instruction is an important component of all the participants' schools, and assessments are used at the start of the year to obtain an

accurate starting point of students' reading strengths and weaknesses. All participants reported that assessment always happens in some form, whether through active student observation, immediate teacher feedback, reading conferences, end-of-unit assessments, fluency checks, progress monitoring, or student work. Informal assessments identify students' strengths and weaknesses and guide the next steps for instruction. Seven participants shared that being an active observer of student learning allows the teacher to adjust in the moment and guide students to achieve the learning outcome. Four participants also shared that they use nonstandardized computerized assessments as part of their students' independent work to provide additional explicit instruction based on a student's individual needs to personalize student instruction. An intentional assessment of student learning provides the teachers with useful information to know whether the students are meeting the learning objective.

Instruction Must Be Purposeful and Multifaceted

Many schools are on the path toward improvement and discovering those characteristics that will guide them toward success. Padilla et al. (2020) identified 11 effective school characteristics and practices implemented in Title I schools that have demonstrated high academic achievement in high-poverty schools. The characteristics and practices noted were categorized in the following areas: instruction, staff, environment, professional development, curriculum, resources, leadership, improvement, culture, parents, and vision. No particular characteristic was found among all schools; however, instruction was identified as an important school characteristic in nine of them, and the other two schools identified it as a close second. Further, instruction was also

considered the strongest and most accurately applied characteristic and practice within the school (Padilla et al., 2020). The instruction was rigorous, purposeful, varied, supported, multifaceted, and aligned to state learning standards. Schools also prioritized allocating sufficient time to maximize student learning (Padilla et al., 2020). Although many characteristics define an effective school, quality instruction by knowledgeable teachers is identified as an important component. The findings of this study revealed that seven participants shared several examples of providing students purposeful and multifaceted instruction to activate student learning and give them the opportunity to make meaning and apply their learning to real-world contexts. Sixty-three percent of participants reported creating an environment that promoted active student participation to foster deeper level thinking. Collaborative learning is another purposeful type of instruction that half of the participants reported using to engage students in cooperative learning activities to maximize student learning and build on student strengths.

A student's difficulty with learning to read may not always result from an inability to read. Students need an opportunity to learn how to read. Moats (2020) recognized the contribution of parents and tutors in supporting a child's reading success; however, the researcher emphasized the critical role of classroom instruction in preventing reading problems as the focus for change. To produce effective teachers of reading, better preparation, professional development, and resources are necessary (Moats, 2020). Although other factors can influence a student's reading performance, a student's best opportunity for success is based on informed pedagogy from knowledgeable teachers focusing on targeted skills for reading acquisition. The findings

in this study support the idea that differentiated instruction allows all students to receive equitable access to grade-level instruction and is adapted to meet a student's individual needs to support student learning. All participants reported using some type of differentiation during their reading instruction, and six participants described using differentiation on a regular basis depending on a student's need during the lesson. All participants shared that differentiated instruction during reading instruction may include center-based activities to practice foundational reading skills, teacher-led small groups for instruction and practice, support for accessing text, teacher-guided access, re-reading, teacher read-aloud, audiobooks, breaking down a skill, sentence frames, checklists, pre-teaching vocabulary, teacher modeling, chunking text, or reframing questions. One participant noted that teachers often think of differentiation in terms of students who are struggling. However, it should be inclusive of all students, including those who are excelling. Meeting the needs of all students so they can access the curriculum is the purpose of differentiation.

According to findings from the 2020 *Teacher Prep Review*, improving literacy begins with equipping teachers with the knowledge to use research-based instructional strategies in the five essential components of effective reading instruction to teach a balanced approach to reading based on student needs (NCTQ, 2020b). Findings from this study identified the instructional approaches teachers used to include direct instruction, explicit instruction, and structured literacy. All participants described using at least one or a combination of instructional approaches to engage their students in achieving their learning goals. Four participants shared examples of using a direct instruction approach

when introducing new skills and concepts to provide students with knowledge of skills and strategies. Demonstrating and modeling a skill was the primary method of direct instruction for 50% of the participants. Three participants described their use of explicit instruction as an approach that contributes to their students' success. All teachers who used explicit instruction reported breaking down a larger reading skill into smaller parts and providing continual checks for student understanding. In doing so, all three of those teachers reported that their students demonstrated a more thorough understanding of the skill and were more engaged and an active participant in their learning. Fifty percent of the participants mentioned a structured literacy approach to teaching reading and the benefit it has made on their students' reading progress. One participant observed her students making the connection in learning how to read, which increased their engagement and motivation to apply what they were learning to what they were reading. Participants indicated that purposeful and multifaceted instruction engages students and accommodates diverse learning styles, needs, and interests. This type of instruction creates an intentional learning environment that supports all students in achieving high standards, producing quality work, and encouraging students to be active participants in their learning.

Finding an effective approach that targets instruction to meet student needs within their ZPD development is the goal of differentiated instruction. Martinez and Plevyak (2020) maintained that providing instruction within a student's ZPD allowed the teacher to tailor instruction to the student's specific needs. Further, much of the instructional time was devoted to classroom management responses of keeping students focused and

attending to instruction. Martinez and Plevyak (2020) concluded that small group instruction provided more student focus and engagement and allowed teachers to provide immediate feedback regarding understanding new skills. Evaluating the type and quality of instruction is important in providing effective instruction that targets students' specific areas of need. In this qualitative study, findings showed that three participants emphasized the importance of creating a collaborative environment that builds student engagement, supports student learning, and develops a love for reading. Creating a collaborative learning environment allows students to build communication and social skills while learning academic content. Participant 1 noted that collaboration is good for all involved because sharing ideas with others activates deep thinking. Participant 2 shared several examples of how collaboration supports her students' learning and contributes to their success. She shared the importance of having classroom conversations for students to understand how their classmates think, which allows students to learn from each other and increases student engagement. Participant 7 also emphasized that developing listening skills in collaborative discussions allows her students to build on responding to their classmates' conversations by connecting their thinking. Students also learn to ask questions for clarification and further explanation. Seventy-five percent of participants also explained the importance of student engagement in supporting student learning, saying it is difficult for learning to occur without engagement. Six participants shared that they engaged their students through active participation (i.e., co-construction writing, book talks), book selection, explicit instruction that builds reading skills, and multimedia tools. Scaffolding is another practice supporting a student's understanding of

the content. Three participants shared that scaffolding is built into their teaching practice for each new concept they teach. Scaffolding provides instructional support while students develop a stronger understanding and greater independence in learning. Participants 1 and 2 explained that they use a gradual release model by modeling the lesson using a think-aloud procedure, providing guided support, and releasing them to work independently as students demonstrate an understanding of the skill. Understanding a teacher's pedagogical practices can provide insight into intervention approaches to improve reading outcomes for struggling readers.

Discrepant Case

Achievement gaps exist among students receiving special education services and students in the general education classroom. Research around the idea of student-specific support substantiates that most students can read (EAB, 2019; Moats, 2020; P. C. Snow, 2021). Further, some researchers maintained that those students needing special education services lacked instruction and experience from knowledgeable teachers rather than having cognitive disabilities (Austin et al., 2017; EAB, 2019; M. Vaughn, 2019). Although researchers acknowledged that reading is attainable for most students, not every student learns in the same way (Chyl et al., 2021; EAB, 2019). Student-specific supports are implemented to identify and intervene to meet those challenges and meet this need. Researchers found that when teachers apply their pedagogical knowledge of teaching reading with their knowledge of their students, they can more effectively address students' individual learning needs (Förster et al., 2018; Parsons et al., 2018; M. Vaughn, 2019).

Similarly, researchers posited that finding a student's ZPD development was key to tailoring instruction based on a student's need (Martinez & Plevyak, 2020). Creating a supportive learning environment based on instructional approaches for all students is possible (Austin et al., 2017; Butler & Nasser, 2020; Connor & Morrison, 2016). Findings from this study support the current research and showed that continual learning and teacher creativity accounted for 29% of the characteristics exhibited by the participants. Teachers in this category demonstrated a desire to continue their learning to meet the demands of the ever-changing needs of their students. As a special education teacher, Participant 8 reported that she did not find her administration supportive or even aware of what she was teaching. Her students' lack of progress was expected based on their placement in special education. To achieve equitable reading outcomes for all students, student-specific supports that are individualized to meet student needs should be considered key to improving a student's reading skills.

Many students do not receive the necessary academic support to attain grade-level reading expectations. "Providing services to students with the greatest academic needs is a social justice issue in the sense that there is no acceptable failure rate" (Austin et al., 2017, p. 208). Connor and Morrison (2016) posited that students come to school with varying abilities in the learning process, making differentiation a key component in developing a student's full reading potential. Further, Connor and Morrison (2016) argued that meeting the needs of all students in learning to read proficiently is possible. However, it calls on schools to avoid fads and politically influenced programs and focus on fostering research partnerships with educators and researchers to develop instruction

and interventions that support student learning (Connor & Morrison, 2016). Findings from this study confirmed those results. Participant 8 noted her initiative to investigate current reading research as a special education teacher. She shared that she did not have administrative or colleague support to provide a reading curriculum to meet her students' needs, so she took the initiative to find what would help her students make progress toward their learning goals. She noted, "If I didn't go off and do it, then it wasn't going to happen." Participant 8 also noted that her students' reading development was impacted by how they viewed reading. She reported that her students with special needs often do not see active reading occurring, so they do not read. One of her perceptions about how students develop as readers is that students become stronger readers by reading. Today, many things compete for her students' attention, making reading for pleasure more challenging. Participant 8 also noted that students would only get as excited as their teachers about reading. Seeing the act of reading was another factor in building a community of readers. Participant 8 noted that students have not experienced reading for pleasure, which she believed limits their development as readers. Although the rate of growth of students who struggle in reading may not be commensurate with their peers, they can still make significant growth with adequate support and intensive intervention.

Conceptual Framework

The conceptual framework I used in this basic qualitative study was Vygotsky's (1978) sociocultural theory. Scholars suggest considering a sociocultural perspective to understand the role of culture, interaction, and collaboration in quality learning (Allman, 2018; Polly et al., 2018). The fundamental constructs of Vygotsky's theory are

understanding the critical role social interaction plays in the construction of knowledge, how language is part of the cognitive process, and the ZPD development in learning (Aliyu & Yakubu, 2019; Allman, 2018; Polly et al., 2018). Further, sociocultural theory maintains that learning is a process by which students acquire knowledge as they make sense of and integrate the information to create new knowledge with the direction and support of more knowledgeable others (Aliyu & Yakubu, 2019).

Within the thought of the sociocultural theory is the idea that the individual is not an isolated entity but that there is a dynamic influence of social interaction and cross-cultural diversity in the development of learning (Polly et al., 2018). Regarding cognitive development, Vygotsky (1978) described learning as a process independent of a child's development that becomes fully manifested when a child interacts with others. Therefore, social learning facilitates development. Further, Vygotsky explained that learning is dependent on the support of a student's environment. The Vygotskian view that learning drives development has significant implications for developing learning experiences. A student's learning experience should promote learning based on their individual development, including cross-cultural differences, to acquire higher levels of development (Allman, 2018; Polly et al., 2018).

Based on the findings of this study, within the context of Vygotsky's (1978) sociocultural theory, participants reported the importance of collaboration and reflection at the district, school, and classroom levels. All participants reported a level of constant reevaluation of what is working and what is not working to reflect on best practices in providing instruction that supports student learning and growth. Furthermore, fifty

percent of participants shared examples of engaging students in cooperative learning activities to maximize learning and build on student strengths. Three participants emphasized the importance of creating a collaborative environment that builds student engagement, supports learning, and develops a love for reading. Creating a collaborative learning environment provides students with an opportunity to build communication and social skills while learning academic content. Participant 1 noted that collaboration is good for all involved because sharing ideas with others activates deep thinking. Participant 2 shared several examples of how collaboration supports her students' learning and contributes to their success. She also shared the importance of having classroom conversations for students to understand how their classmates think, which allows students to learn from each other and increases student engagement. Participant 7 emphasized that developing listening skills in collaborative discussions allows her students to build on responding to their classmates' conversations by connecting their thinking. Students also learn to ask questions for clarification and further explanation. Seventy-five percent of participants also explained the importance of student engagement in supporting student learning, saying it is difficult for learning to occur without engagement. Six participants shared that they engaged their students through active participation (i.e., co-construction writing, book talks), book selection, explicit instruction that builds reading skills, and multimedia tools.

Another important and extensively applied aspect of Vygotsky's (1978) perspective is the relationship between learning and development, including the concept of ZPD. The ZPD concept supports the idea that pedagogical practices should be based

on the process rather than the product and be more intentional in considering a student's individual development when making instructional decisions (Polly et al., 2018). Nardo (2021) maintained that Vygotsky's theory of the ZPD is often incorrectly interpreted as an educational tool or simplistic technique instead of recognizing its enriching pedagogical dimension and the role of the teacher in implementing it. Nardo (2021) argued that this interpretation simplified the learning process as experiences determined by the outside world and contended that Vygotsky's concept of ZPD is more than a method; it is cultivated from a pedagogical relationship. Further, ZPD is associated with scaffolding; however, a deeper look into Vygotsky's (1978, as cited in Nardo, 2021) work shows that his concept of education emphasizes individual development and human evolution. Findings from this study revealed that scaffolding is another practice used to support a student's understanding of the content being taught. Three participants shared that scaffolding is built into their teaching practice for each new concept they teach. Scaffolding provides instructional support while students develop a stronger understanding and greater independence in learning. Participants 1 and 2 explained that they use a gradual release model by modeling the lesson using a think-aloud procedure, providing guided support, and releasing them to work independently as students demonstrate an understanding of the skill. Based on the findings from this study, applying Vygotsky's perspective of sociocultural theory and ZPD to reading instruction provided a better understanding of how teachers reflected on their current practices and how those practices are aligned with their students' individual reading development to make better instructional decisions that support reading achievement.

Limitations of the Study

There are limitations to trustworthiness that arose from the execution of this study. My study was limited based on a small sample size of eight interviews from five schools. The responses gathered through this basic qualitative study provided in-depth information on third and fourth-grade teachers' perceptions of practices that may contribute to reading proficiency in Massachusetts elementary schools. However, the smaller sample size provided results that were a limited depiction due to a smaller number of interviews. Although I provided thick descriptions of the phenomenon and the context of how my dissertation study took place, another limitation of this basic qualitative study is that third and fourth-grade teachers from only five schools participated. Therefore, the results may not be transferable to other settings.

Recommendations

The purpose of this basic qualitative study was to describe the practices perceived by third and fourth-grade teachers to improve the reading proficiency of Massachusetts elementary students. The results of this study contribute to the existing body of research on how effective reading teaching practices may improve student reading outcomes. The results of this study could provide insight for other schools in their efforts to improve student reading proficiency and provide strategies for improving student reading outcomes in schools where students are not demonstrating reading growth.

The data generated five themes that described the practices of teachers from schools that demonstrate a pattern of excellence in reading proficiency. Based on those themes, I recommend that school districts create an institutional focus that emulates an

attitude of constant schoolwide reflection to determine what is and is not working by supporting teachers from the leadership down to the classroom. Further recommendations include teachers having a thorough understanding of the curriculum and how the state standards build upon each other to design a framework to allow teachers to be intentional about their instruction. Another recommendation is keeping data at the forefront of instruction using intentional assessments to help teachers make informed decisions that benefit student outcomes. Lastly, I recommend creating an intentional learning environment through purposeful and multifaceted instruction to engage and accommodate diverse learning styles, needs, and interests. The findings of this study can provide teachers and administrators with a model of valuable knowledge and effective skills for teachers to integrate and apply to their reading instruction.

Future Research

Seven of the eight participants in this study were general education teachers. Although several participants occasionally taught students with special needs, only one teacher was a special education teacher and taught only students with special needs. Previous research has reported that most students have the ability to read; therefore, I recommend further research be conducted to focus on the reading growth of students with special needs to identify and describe practices that result in improved reading proficiency for this student population. Additional recommendations for future research on this topic include increasing the number of participants in the study to gather additional perspectives on practices that may contribute to reading proficiency.

Implications

Researchers have suggested that further research is needed to understand the perspectives of other high-performing teachers to identify teacher beliefs and practices that may influence student reading outcomes (Schmid, 2018). Because Massachusetts schools have demonstrated a consistent pattern of excellence in reading proficiency, understanding the patterns of practice teachers perceive to improve reading proficiencies could provide insight for other schools to improve student reading proficiency.

The results of this study can potentially impact positive social change at the individual and organizational levels. The findings of this study may contribute to positive social change at the individual level by developing a teacher's practice to include an understanding of how they can adapt their instruction to improve student learning outcomes. Further, the findings of this study may contribute to positive social change by providing teachers with an understanding of the practices Massachusetts teachers use with their students to foster positive reading outcomes.

Further, a school's organizational level can use the findings from this study to develop a district-wide culture of collaboration and reflection. Having an institutional focus, from the leadership down to the classroom, to reflect on what they are doing, what they can do better, and how they can do better may provide strategies for improving student reading outcomes in schools where students are not demonstrating reading growth. Also, creating an instructional support system among district leaders, school administration, and leadership may improve teachers' instructional practice and contribute to their school's reading growth. Developing a collaborative and reflective

environment can lead to open and productive conversations about how school districts can best support all students within their schools.

Conclusion

Understanding this phenomenon is important because basic reading skills are foundational to a student's academic success. Nationwide basic reading skills continue to decline or show stagnant growth, while Massachusetts's scores rank higher than the nationwide average in achieving positive reading proficiency outcomes. Recognizing that low reading achievement scores continue to be a problem in elementary schools across the United States, the results of this study provided an explicit understanding of the practices of elementary schools in Massachusetts, where they demonstrate a consistent pattern of excellence in reading proficiency.

In this basic qualitative study, I described the practices of third and fourth-grade teachers in Massachusetts where schools are demonstrating reading growth. Eight third and fourth-grade teachers from across five elementary schools in Massachusetts were interviewed to understand their perceptions of the practices that may contribute to students' reading proficiency. Teachers believed the culture and the environment of the school and classrooms are important contributors to reading success. Teachers reported an institutional focus on collaboration and reflection, which provided them with meaningful feedback to evaluate and improve their instruction. Having a collaborative environment has allowed teachers to celebrate successes and provide them with a safe place to ask for additional support. Teachers also recognized the need for a depth of understanding of curriculum and state standards to be intentional about their instruction

to support student learning based on skills students should know. Teachers also shared that student assessment focuses on improving student learning and is a significant factor in shaping instruction and making informed decisions that connect assessment to instruction. Teachers also reported that instruction must be purposeful and multifaceted to activate student learning and give them the opportunity to make meaning and apply their learning to real-world contexts. When district-level administration supports the teachers from the leadership down to the classroom teachers, it provides a collaborative environment for teachers with meaningful feedback to evaluate and improve their instruction. Likewise, when teachers create an intentional learning environment that supports all students in achieving high standards, producing quality work, and encouraging students to be active participants in their learning, they have the potential to improve students' reading proficiency.

References

Abed, M. G. (2015). A consideration to two main ethical issues in educational research, and how may these be addressed. *Journal of Educational Psychology*, *8*(3), 1–14. https://files.eric.ed.gov/fulltext/EJ1098173.pdf

Academy in Manayunk. (2022). *Pathways to Proficient Reading.* AIM Pathways. https://aimpathwaysonline.org

Aliyu, M. M., & Yakubu, H. S. (2019). Implications of the sociocultural theory on students' reading comprehension. *Bulletin of Advanced English Studies*, *3*(2), 84–91. https://doi.org/10.31559/baes2019.3.2.3

Allington, R. L. (2004). Setting the record straight. *Educational Leadership*, *61*(6), 22–25.

Allman, B. (2018). Socioculturalism. In R. Kimmons (Ed.), *The students' guide to learning design and research* (pp. XX–YY). EdTech Books. https://edtechbooks.org/studentguide/socioculturalism

Amendum, S. J., & Liebfreund, M. D. (2019). Situated learning, professional development, and early reading intervention: A mixed methods study. *The Journal of Educational Research*, *112*(3), 342–356. https://doi.org/10.1080/00220671.2018.1523782

Apel, K. (2022). A different view on the simple view of reading. *Remedial and Special Education*, *43*(6), 434–447. https://doi.org/10.1177/07419325211063487

Austin, C. R., Vaughn, S., & McClelland, A. M. (2017). Intensive reading interventions for inadequate responders in grades K-3: A synthesis. *Learning Disability*

Quarterly, *40*(4), 191–210. https://doi.org/10.1177/0731948717714446

Bayless, S. D., Jenson, J. M., Richmond, M. K., Pampel, F. C., Cook, M., & Calhoun, M. (2018). Effects of an after-school early literacy intervention on the reading skills of children in public housing communities. *Child Youth Care Forum*, *47*, 537–561. https://doi.org/10.1007/s10566-018-9442-5

Borchers, L. R., Bruckert, L., Dodson, C. K., Travis, K. E., Marchman, V. A., Ben-Shachar, M., & Feldman, H. M. (2019). Microstructural properties of white matter pathways in relation to subsequent reading abilities in children: A longitudinal analysis. *Brain Structure and Function*, *224*, 891–905. https://doi.org/10.1007/s00429-018-1813-z

Borofsky, M., Bowse, T. J., & II George-Davis, S. (2013). *Massachusetts comprehensive assessment system: An overview* [pdf]. The University of Vermont. https://www.uvm.edu/sites/default/files/Department-of-Political-Science/vlrs/Education/MCAS.pdf

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2021). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. *Qualitative Research in Sport, Exercise and Health*, *13*(2), 201–216. https://doi.org/10.1080/2159676X.2019.1704846

Brokamp, S. K., Houtveen, A. M., & van de Grift, W. (2019). The relationship among

students' reading performance, their classroom behavior, and teacher skills. *The Journal of Educational Research*, *112*(1), 1–11. https://doi.org/10.1080/00220671.2017.1411878

Burkholder, G. J., Cox, K. A., & Crawford, L. M. (2016). *The scholar-practitioner's guide to research design.* Laureate Publishing.

Burkins, J., & Yates, K. (2021). *Shifting the balance: 6 ways to bring the science of reading into the balanced literacy classroom.* Stenhouse.

Burns, M. (2017). *The reading brain: How your brain helps you read, and why it matters* [Blog]. The Science of Learning Blog. Carnegie Learning. https://www.scilearn.com/the-reading-brain/

Butler, J. M., & Nasser, K. O. (2020). Effective approaches in reducing reading discrepancy scores between students in general education and special education. *The Journal of Special Education Apprenticeship*, *9*(2). 1–13.

Cantrell, E. (2021, March 30). *Voices of impact series speaker series: Teaching is rocket science* [Video]. Texas A&M School of Education & Human Development.

Castillo-Montoya, M. (2016). Preparing for interview research: The interview protocol refinement framework. *The Qualitative Report*, *21*(5), 811–831. https://doi.org/10.46743/2160-3715/2016.2337

Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, *19,* 5–51. https://doi.org/10.1177/1529100618772271

Catts, H. W. (2018). The simple view of reading: Advancements and false impressions.

Remedial and Special Education, *39*(5), 317–323. https://doi.org/10.1177/0741932518767563

Chappuis, S., Commodore, C., & Stiggins, R. J. (2017). *Balanced assessment systems: Leadership, quality, and the role of classroom assessment*. Corwin.

Chew, S. L., & Cerbin, W. J. (2021). The cognitive challenges of effective teaching. *Journal of Economic Education, 52*(1), 17-40. https://doi.org/10.1080/00220485.2020.1845266

Chiu, Y. D. (2018). The simple view of reading across development: Prediction of grade 3 comprehension from prekindergarten skills. *Remedial and Special Education, 39*(5), 289-303. https://doi.org/10.1177/0741932518762055

Chyl, K., Fraga-González, G., Brem, S., & Jednoróg, K. (2021). Brain dynamics of (a)typical reading development – A review of longitudinal studies. *npj Science of Learning, 6*(4), 1–9. https://doi.org/10.1038/s41539-020-00081-5

Clark, S. K., Helfrich, S. R., & Hatch, L. (2017). Examining preservice teacher content and pedagogical content knowledge needed to teach reading in elementary school. *Journal of Research in Reading, 40*(3), 219-232. https://doi.org/10.1111/1467-9817.12057

Compton-Lilly, C. F., Mitra, A., Guay, M., & Spence, L. K. (2020). A confluence of complexity: Intersections among reading theory, neuroscience, and observations of young readers. *Reading Research Quarterly, 55*(S1), S185-S195. https://doi.org/10.1002/rrq.348

Connor, C. M., & Morrison, F. J. (2016). Individualizing student instruction in reading:

Implications for policy and practice. *Policy Insights from the Behavioral and Brain Sciences, 3*(1), 54-61. https://doi.org/10.1177/2372732215624931

Coyne, M. D., Oldham, A., Dougherty, S. M., Leonard, K., Koriakin, T., Gage, N. A., Burns, D., & Gillis, M. (2018). Evaluating the effects of supplemental reading intervention within an MTSS or RTI reading reform initiative using a regression discontinuity design. *Exceptional Children, 84*(4), 350-367. https://doi.org/10.1177/0014402918772791

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Sage.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches.* SAGE.

Danish, J., Saleh, A., Andrade, A., & Bryan, B. (2017). Observing complex systems thinking in the zone of proximal development. *Instructional Science, 45*(1), 5-24. https://doi.org/10.1007/s11251-016-9391-z

David, A. D., Consalvo, A., Grote-Garcia, S., Burke, A., Jansky, K., & Semingson, P. (2020). Teaching Goldilocks to read: Too much, too little, or the just right amount of phonics? *English in Texas*, *50*(1), 42–49.

DellaVecchia, G. P. (2020). Don't leave us behind: Third-grade reading laws and unintended consequences. *Michigan Reading Journal, 52*(2), 7-16.

DellaVecchia, G. P. (2022). *Retention in grade and third-grade "trigger" laws: History, politics, and pitfalls.* In: Gabriel, R. (eds) How Education Policy Shapes Literacy Instruction. Palgrave Macmillan Cham. https://doi.org/10.1007/978-3-031-08510-

9_2

Didion, L., Toste, J. R., & Filderman, M. J. (2020). Teacher professional development and student reading achievement: A meta-analytic review of the effects. *Journal of Research on Educational Effectiveness, 13*(1), 29-66. https://doi.org/10.1080/19345747.2019.1670884

Driscoll, D. P. (2017). *Commitment and common sense: Leading education reform in Massachusetts*. Harvard Education Press.

duPlessis, P. J. (2019). Closing the achievement gap in disadvantaged communities: Lessons from successful schools. *African Education Review, 16*(6), 22-36. https://doi.org/10.1080/18146627.2018.1464649

Education Advisory Board [EAB]. (2019). *Narrowing the third-grade reading gap: Embracing the science of reading*. https://attachment.eab.com/wp-content/uploads/2019/04/34B856A619F64FD3B8C6CEFD70C77B34-1.pdf

Edwards, S. (2016). *Reading and the brain.* Harvard Mahoney Neuroscience Institute. https://hms.harvard.edu/news-events/publications-archive/brain/reading-brain

Ehri, L. C. (2020). The science of learning to read words: A case for systematic phonics instruction. *Reading Research Quarterly, 55*(S1), S45-S60. https://doi.org/10.1002/rrq.334

Förster, N., Kawohl, E., & Souvignier, E. (2018). Short- and long-term effects of assessment-based differentiated reading instruction in general education on reading fluency and reading comprehension. *Learning and Instruction, 56*, 98-109. https://doi.org/10.1016/j.learninstruc.2018.04.009

Goodnight, C. I., Wood, C. L., & Thompson, J. L. (2020). Effects of in-service and coaching to increase teachers' use of research-based strategies in beginning reading. *Preventing School Failure: Alternative Education for Children and Youth, 64*(1), 67-76. https://doi.org/10.1080/1045988X.2019.1680944

Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education, 7*(1), 6–10. https://doi.org/10.1177/074193258600700104

Gredler, M. E. (2012). Understanding Vygotsky for the classroom: Is it too late? *Educational Psychology Review, 24*(1), 113-131. https://doi.org/10.1007/s10648-011-9183-6

Hanford, E. (2018). Hard words: Why aren't kids being taught to read? *APM Reports*. https://www.apmreports.org/episode/2018/09/10/hard-words-why-american-kids-arent-being-taught-to-read

Hanford, E. (2020). What the words say. *APM Reports*. https://www.apmreports.org/episode/2020/08/06/what-the-words-say?utm_campaign=APM+Reports+-+Reading+Comprehension+-+20200806_100717&utm_medium=email&utm_source=sfmc_Newsletter&utm_content=reading%20comprehension&utm_term=3732367

Hasbrouck, J., & Tindal, G. (2017). An update to compiled ORF norms (Tech. Rep. No. 1702). Eugene, OR: Behavioral Research and Teaching, University of Oregon. https://files.eric.ed.gov/fulltext/ED594994.pdf

Hauser, R. M. (2020). What is the matter with America's schools? *Proceedings of the*

American Philosophical Society, 164(1), 1-44.

Hroncich, C. (2022, October 24). NAEP 2022: Gloomy results on the nation's report card [Blog]. *CATO Institute.* https://www.cato.org/blog/naep-2022-gloomy-results-nations-report-card

International Dyslexia Association [IDA]. (2019). *Structured literacy: An introductory guide.* https://dyslexialibrary.org/wp-content/uploads/file-manager/public/2564/structured-literacy-brief-9-16-21.pdf

Jordan, R. L. P., & Bratsch-Hines, M. (2020). Associations of reading knowledge with kindergarten and first grade teachers reported instructional strategies, *Literacy Research and Instruction, 59*(4), 277-297. https://doi.org/10.1080/19388071.2020.1774689

Kahlke, R. (2018). Reflection/Commentary on a past article: "Generic qualitative approaches: Pitfalls and benefits of methodological mixology", *International Journal of Qualitative Methods, 17,* 1-3. https://doi.org/10.1177/1609406918788193

Kelly, C. H. (2018). A backwards glance: How 20th century reading research and practices have shaped current instructional approaches. *Making Literacy Connections, 33,* 4-12.

Kent, S. C., Wanzek, J., & Al Otaiba, S. (2017). Reading instruction for fourth-grade struggling readers and the relation to student outcomes. *Reading & Writing Quarterly, 33*(5), 395-411. https://doi.org/10.1080/10573569.2016.1216342

Kershaw, S., & Schatschneider, C. (2012). A latent variable approach to the simple view

of reading. *Reading and Writing, 25*(2), 433–464. https://doi.org/10.1007/s11145-010-9278-3

Kilpatrick, D. A. (2015). *Essentials of assessing, preventing, and overcoming reading difficulties*. John Wiley & Sons.

Kurit, S. (2022). *A prospective study of the relations among oral reading fluency, silent reading fluency, and reading comprehension among school aged children with speech disorders* [Honors Thesis, The Florida State University]. Florida State University Libraries.

Lewis, B., & Luma, M. (Hosts). (2021, March 15). *Episode 33: Interview with Vanessa Harlow* [Audio podcast]. Leaders of Literacy. https://radiopublic.com/leaders-of-literacy-6NqwJo/s1!00ebd

Li, H., Kepinska, O., Caballero, J. N., Zekelman, L., Marks, R. A., Uchikoshi, Y., Kovelman, I., & Hoeft, F. (2021). Decoding the role of the cerebellum in the early stages of reading acquisition. *Cortex, 141*, 262-279. https://doi.org/10.1016/j.cortex.2021.02.033

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Lindo, E. J., Weiser, B., Cheatham, J. P., & Allor, J. H. (2018). Benefits of structured after-school literacy tutoring by university students for struggling elementary readers. *Reading & Writing Quarterly, 34*(2), 117-131. https://doi.org/10.1080/10573569.2017.1357156

Lonigan, C. J., Burgess, S. R., & Schatsschneider, C. (2018). Examining the simple view of reading with elementary school children: Still simple after all these years.

Remedial and Special Education, 39(5), 260-273. https://doi.org/10.1177/0741932518764833

Lorimor-Easley, N. A., & Reed, D. K. (2019, April 9). *An explanation of structured literacy, and a comparison to balanced literacy.* https://iowareadingresearch.org/blog/structured-and-balanced-literacy#:~:text=Put%20simply%2C%20Structured%20Literacy%20is,the%20sentence%20and%20paragraph%20levels

Martinez, K., & Plevyak, L. (2020). Small versus whole group reading instruction in an elementary reading classroom. *Humanising Language Teaching, 22*(1).

Matheny, K. T., Thompson, M. E., Flores, C. T., & Reardon, S. F. (2023). Uneven progress: Trends in academic performance among U.S. school districts. *The American Educational Research Journal, 0*(0). https://doi.org/10.3102/00028312221134769

Mathes, P. G., Denton, C. A., Fletcher, J. M., Anthony, J. L., Francis, D. J., & Schatschneider, C. (2005). The effects of theoretically different instruction and student characteristics on the skills of struggling readers. *Reading Research Quarterly*, *40*(2), 148-182. https://doi.org/10.1598/RRQ.40.2.2

McGrath, C., Palmgren, P. J., & Liljedahl, M. (2019). Twelve tips for conducting qualitative research interviews. *Medical Teacher, 41*(9), 1002-1006. https://doi.org/10.1080/0142159X.2018.1497149

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. Jossey-Bass.

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation.* John Wiley & Sons.

Moats, L. C. (2020). Teaching reading is rocket science: What expert teachers of reading should know and be able to do. https://www.aft.org/sites/default/files/moats.pdf

Morris, D., Meyer, C., Trathen, W., McGee, J., Vines, N., Stewart, T., Gill, T., & Schlagal, R. (2017). The simple view, instructional level, and the plight of struggling fifth-/sixth-grade readers. *Reading & Writing Quarterly, 33*(3), 278-289. https://doi.org/10.1080/10573569.2016.1203272

Myrberg, E., Johansson, S., & Rosén, M. (2019). The relation between teacher specialization and student reading achievement. *Scandinavian Journal of Educational Research, 63*(5), 744-758. https://doi.org/10.1080/00313831.2018.1434826

Nardo, A. (2021). Exploring a Vygotskian theory of education and its evolutionary foundations. *Educational Theory, 71*(3), 331-352. https://doi.org/10.1111/edth.12485

National Board for Professional Teaching Standards. (2016). *Literacy: Reading–language arts standards* (2nd ed). https://www.nbpts.org/wp-content/uploads/2021/09/EMC-LRLA.pdf

National Center for Education Statistics, [NCES]. (2022). *The nation's report card: 2022 reading grade 4 and 8*. U.S. Department of Education. https://www.nationsreportcard.gov/highlights/reading/2022/

National Council on Teacher Quality (NCTQ). (2020a). *Our approach.*

https://www.nctq.org/about/approach

National Council on Teacher Quality (NCTQ). (2020b). 2020 *Teacher prep review: Program performance in early reading instruction.* https://www.nctq.org/dmsView/NCTQ_2020_Teacher_Prep_Review_Program_Performance_in_Early_Reading_Instruction

Ng, C., & Leicht, A. (2019). Struggles as engagement in teacher change: A longitudinal case study of a reading teacher's changing practices. *Teachers and Teaching, 25*(4), 453-468. https://doi.org/10.1080/13540602.2019.1625764

Northrop, L. (2017). Breaking the cycle: Cumulative disadvantage in literacy. *Reading Research Quarterly, 52*(4), 391-396. https://doi.org/10.1002/rrq.195

Nunnery, J. A., Ross, S. M., Chappell, S., Pribesh, S., & Hoag-Carhart, E. (2011). The impact of the NISL executive development program on school performance in Massachusetts: Cohort 2 results. https://files.eric.ed.gov/fulltext/ED531042.pdf

Padilla, G., Guerra, F., & Zamora, R. (2020). Effective school practices in Title I schools exceeding educational expectations (E^3). *International Journal of Educational Reform, 29*(2), 103-122. https://doi.org/10.1177/1056787919886582

Paige, D. D., Smith, G. S., Rasinski, T. V., Rupley, W. H., Magpuri-Lavell, T., & Nichols, W. D. (2019). A path analytic model linking foundational skills to Grade 3 reading achievement. *The Journal of Educational Research, 112*(1), 110-120.

Palaganas, E. C., Sanchez, M. C., Molintas, M. P., & Caricativo, R. D. (2017). Reflexivity in qualitative research: A journey of learning. *The Qualitative Report, 22*(2), 426-438. https://nsuworks.nova.edu/tqr/vol22/iss2/5

Parsons, S. A., Vaughn, M., Scales, R. Q., Gallagher, M. A., Parsons, A. W., Davis, S. G., Pierczynski, M., & Allen, M. (2018). Teachers' instructional adaptations: A research synthesis. *Review of Educational Research, 88*(2), 205-242. https://doi.org/10.3102/0034654317743198

Patael, S. Z., Farris, E. A., Black, J. M., Hancock, R., Gabrieli, J. D. E., Cutting, L. E., & Hoeft, F. (2018). Brain basis of cognitive resilience: Prefrontal cortex predicts better reading comprehension in relation to decoding. *PLoS ONE, 13*(6), 1–22. https://doi.org/10/1371/journal.pone.0198791

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE.

Petscher, Y., Cabell, S. Q., Catts, H. W., Compton, D. L., Foorman, B. R., Hart, S. A., Lonigan, C. J., Phillips, B. M., Schatschneider, C., Steacy, L. M., Terry, N. P., & Wagner, R. K. (2020). How the science reading informs 21st-century education. *Reading Research Quarterly, 55*(S1), S267-S282. https://doi.org/10.1002/rrq.352

Pittman, R. T., Zhang, S., Binks-Cantrell, E., Hudson, A., & Joshi, R. M. (2019). Teachers' knowledge about language constructs related to literacy skills and student achievement in low socio-economic schools. *Dyslexia, 26*(2), 200-219. https://doi.org/10.1002/dys.1628

Polly, D., Allman, B., Casto, A., & Norwood, J. (2018). Sociocultural perspectives of learning In R. West (Ed.), *Foundations of Learning and Instructional Design Technology* (1st ed). https://lidtfoundations.pressbooks.com/chapter/sociocultural-learning/

Rasinski, T., Paige, D., Rains, C., Stewart, F., Julovich, B., Prenkert, D., Rupley, W. H., & Nichols, W. D. (2017). Effects of intensive fluency instruction on the reading proficiency of third-grade struggling readers. *Reading & Writing Quarterly, 33*(6), 519-532. https://doi.org/10.1080/10573569.2016.1250144

Rasinski, T., & Young, C. (2017). Effective instruction for primary grade students who struggle with reading fluency. *The Reading Teacher, 70*(5), 519-524. https://doi.org/10.1108/S1479-363620170000011010

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

Rastle, K. (2018). The place of morphology in learning to read in English. *Cortex*. Advance online publication. https://doi.org/10.1016/j.cortex.2018.02.008

Ravitch, D. (2016). *The death and life of the great American school system: How testing and choice are undermining education*. Basic Books.

Ravitch, D. (2019). *The wit and wisdom of Diane Ravitch.* Garn Press.

Ravitch, S. M., & Carl, N. M. (2016). *Qualitative research: Bridging the conceptual, theoretical, and methodological.* SAGE.

Regional Educational Service Agencies. (n.d.). *Quick Guide for Multi-Tiered System of Supports: The Building Level*. https://resources.finalsite.net/images/v1568836530/resanet/v3v3youp8fkgrbzuivve/BuildingMTSSQuickGuide.pdf

Rijk, Y., Volman, M., Haan, D., & Oers, B. (2017). Maximising meaning: creating a

learning environment for reading comprehension of informative texts from a Vygotskian perspective. *Learning Environments Research, 20*(1), 77-98. https://doi.org/10.1007/s10984-016-9218-5

Risko, V. J., & Reid, L. (2019). What really matters for literacy teacher preparation? *Reading Teacher, 72*(4), 423-429. https://doi.org/10.1002/trtr.1769

Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). SAGE.

Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). SAGE.

Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. In Neuman, S. B., & Dickinson, D. K. (Eds.), *Handbook of Early Literature Research,* p. 97-110). Guilford Press.

Schmid, R. (2018). Pockets of excellence: Teacher beliefs and behaviors that lead to high student achievement at low achieving schools, *Sage Open, 8*(3)*,* 1-10. https://doi.org/10.1177/2158244018797238

Sedita, J. (2020, April 7). How the brain learns to read [Blog]. https://keystoliteracy.com/blog/how-the-brain-learns-to-read/

Seidenberg, M. S. (2018). *Language at the speed of sight: How we read, why so many can't, and what can be done about it.* Basic Books.

Seidenberg, M. S., Borkenhagen, M. C., & Kearns, D. M. (2020). Lost in translation? Challenges in connecting reading science and educational practice. *Reading Research Quarterly, 0*(0), 1-12. https://doi.org/10.1002/rrq.341

Shanahan, T. (2017, November 5). *If you really want higher test scores rethink reading*

comprehension instruction [Blog]. https://www.shanahanonliteracy.com/blog/if-you-really-want-higher-test-scores-rethink-reading-comprehension-instruction#sthash.yWWJNzCn.dpbs

Shanahan, T. (2020). What constitutes a science of reading instruction? *Reading Research Quarterly, 55*(S1), S235-S247. https://doi.org/10.1002/rrq.349

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*(2), 63–75. https://doi.org/10.3233/EFI-2004-22201

Snow, C. (2002). Reading for understanding: Toward an R&D program in reading comprehension [pdf]. RAND http://www.rand.org/pubs/monograph_reports/2005/MR1465.pdf

Snow, P. C. (2021). SOLAR: The science of language and reading. *Child Language Teaching and Therapy, 37*(3), 222-233. https://doi.org/10.1177/0265659020947817

Sparks, S. D. (2021, June 15). Is the bottom falling out for readers who struggle the most? *Education Week, 40*(37).

State Collaborative on Reforming Education [SCORE]. (2020, February 10). *The science of reading*. https://tnscore.org/sdm_downloads/the-science-of-reading/

Suárez, N., Jiménez, J. E., & Sánchez, C. R. (2020). Teaching reading: A case study through mixed methods. *Frontiers in Psychology, 11*, 1-12. https://doi.org/10.3389/fpsyg.2020.01083

Tennessee Department of Education. (2016). *Setting the foundation: A report on*

elementary grades reading in Tennessee.

Tierney, S. (2017, July 7). Using data to help students and teachers [Blog post]. Retrieved from https://www.achievementnetwork.org/anetblog/mas-using-data

Tudge, J. R. H., & Winterhoff, P. A. (1993). Vygotsky, Piaget, and Bandura: Perspectives on the relations between the social world and cognitive development. *Human Development*, *36*, 61.

Tunmer, W. E., & Hoover, W. A. (2019). The cognitive foundations of learning to read: A framework for preventing and remediating reading difficulties. *Australian Journal of Learning Difficulties, 24*(1), 75-93. https://doi.org/10.1080/19404158.2019.1614081

Vaughn, M. (2019). Adaptive teaching during reading instruction: A multi-case study. *Reading Psychology, 40*(1), 1-33. https://doi.org/10.1080/02702711.2018.1481478

Vaughn, S., & Linan-Thompson, S. (2004). *Research-based methods of reading instruction, grades K-3.* Association for Supervision and Curriculum Development.

Vellutino, F. R., Scanlon, D. M., Sipay, E. R., Small, S. G., Pratt, A., Chen, R. S., & Denckla, M. B. (1996). Cognitive profiles of difficult-to-remediate and readily remediated poor readers: Early intervention as a vehicle for distinguishing between cognitive and experiential deficits as basic causes of specific reading disability. *Journal of Educational Psychology, 88*(4), 601-638.

Venketsamy, R., & Sibanda, S. (2021). Exploring strategies teachers use to develop

literacy skills among English first additional language learners in the foundation phase. *Perspectives in Education, 39*(2), 253-266. https://doi.org/10.18820/2519593X/pie.v39.i2.18

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Vygotsky, L. S. (1986). *Thought and Language.* (E. Hanfmann, G. Vakar, & A. Kozulin, Eds. & Trans.). Massachusetts Institute of Technology.

Walsh, K. (2020). *The contributions of oral language components to reading comprehension in early elementary students* [Master of Arts, Mount Saint Vincent University]. http://ec.msvu.ca:8080/xmlui/bitstream/handle/10587/2150/KathleenWalshMAScSchoolPsychologyThesis2020.pdf?sequence=1&isAllowed=y

Watson, S. L., & Reigeluth, C. M. (2016). The learner-centered paradigm of education. In R. West (Ed.). *Foundations of learning and instructional design technology.* https://lidtfoundations.pressbooks.com/chapter/systemic-change/

Wexler, N. (2019). *The knowledge ga*p: The hidden cause of America's broken education system and how to fix it. Avery.

Yopp, H. K. (1992). Developing phonemic awareness in young children. *Reading Teacher, 45*(9), 696-703.

Zhou, M., & Brown, D. (Eds.). (2017). *Educational learning theories*. https://oer.galileo.usg.edu/cgi/viewcontent.cgi?article=1000&context=education-textbooks

Appendix A: Interview Protocol

Interviewer: Melinda Bentley Date:

Location: Time of Interview:

Interviewee Identification Number:

Prior to the Interview

- Greet the participant and thank them for participating in the study.
- Explain the purpose of the interview.
    - Remind participants that they are invited to take part in a research study about perceptions of practices that may contribute to improving reading proficiency.
    - Allow an opportunity for the participant to ask questions or refuse participation.
- Review the informed consent form with participant and provide opportunity to ask questions.
    - Remind them that participation is ongoing and voluntary and can be stopped at any time without experiencing any penalties.
- Request consent to record the interview.
- Address terms of confidentiality
    - Explain who will have access to the recording and transcriptions and under what circumstances.
    - Assure participant that their privacy will be respected and their identify will not be revealed.
    - Explain that the research records will be kept secured using password protected files and in a locked location.
- Explain the format, structure, and process of the interview.
    - Describe the structure of the questions, the process, the timing, and your expectations and role.
    - Confirm how much time has been allotted for the interview.
- Ask if the participant has any questions before starting the interview.
- If you have consent to proceed, make sure the recording device is turned on and recording.
- Tell the participant a little bit about myself.
- Obtain general descriptive information about the participant.
- Tell me about your background (education, educational training in reading and literacy, years of experience, years teaching reading, years teaching in MA.
- Explain that the following questions will be utilized to guide this interview. Follow-up questions may be asked as necessary.

Introduction

Massachusetts schools have demonstrated a consistent pattern of excellence in reading proficiency. This study, *Teachers' Perceptions of Practices that May Contribute to Reading Proficiency in Massachusetts Elementary Schools,* could help other educators understand their patterns of practice and provide insight for other schools in their efforts to improve student reading proficiency. For this study, you are invited to describe your perceptions of the practices that you perceive contribute to improving reading proficiency of students in Massachusetts.

Research Question What do third and fourth-grade teachers perceive as practices they use that contribute to improving the reading proficiency of Massachusetts elementary students?	
Interview Questions	**Field Notes**
1. Why do you think Massachusetts schools lead the U.S. in progress on the NAEP?	
2. How are basic reading skills taught in the classroom?	
3. What do you perceive as practices that may contribute to your students' success in reading proficiency? a. Explain how you decide what practices to use during your instruction. b. Explain how these practices contribute to success in reading proficiency	
Conceptual Framework Constructs • Knowledge of how student learning develops. • Collaborative process of learning, the sociocultural influence on learning, and the learning environment through student-teacher and student-peer relationships. • Zone of proximal development	
Interview Questions	**Field Notes**
4. What are your beliefs about how students develop as readers?	
5. What is your understanding of collaborative learning? a. How do you use collaborative learning to teach reading?	
6. Please tell me how you differentiate instruction in reading.	

a. How often do you use differentiation? b. What formative information do you use to differentiate? c. How do you know when the differentiation is effective?	
Final Thoughts	
7. Is there anything else that you would like to share before we finish the interview?	

Conclusion

Thank you for taking the time to interview with me today and for sharing your experience in what you perceive as the practices you use that may contribute to your students' reading success.

Following the Interview

- Thank the participant for participating in the study.
- Assure participant that all their information related to the study will remain confidential.
- Provide contact information and share that there may be subsequent contact if there is a need to clarify information or ask additional questions, and to perform member checking.
- Follow-up with an email or handwritten note of appreciation

Appendix B: Coding Table

Themes	Categories	Examples of Codes
(1) Teachers believe the culture and environment of the school and classrooms are important contributors to reading success.	Professional Culture	Feel Supported, Principal Leadership, Teacher Collaboration, Culture of High Performance, Teacher Autonomy
	Classroom Environment	Building Community, Expectations
	Reading Environment	Love of Reading, Advocate for Books, Love of Teaching Reading
(2) Teachers report an institutional focus on collaboration and reflection	Systematic Evaluation	Evaluating Curriculum, Administrative Support, Common Language
	Instructional Support System	Instructional Coach, Literacy Leadership Team, Instructional Guide
	Understanding State Standards	What Standards Say, Designing Instruction, Developing Deeper Reading Skills
	Characteristics of Teacher Practice	Continual Learning, Teacher Reflection, Teacher Commitment
(3) Teachers need a depth of understanding of curriculum and state standards.	Understanding State Standards	Comfortable and Familiar, Matching Lesson to Standard
	Curriculum	Adapting Curriculum, Teacher Choice, Fidelity, Research-based
	Curriculum Framework	Standards-based Instruction, Science of Reading, District Literacy Plan
(4) Assessment focuses on improving student learning.	Assessing Student Learning	Analyzing Data, Analyzing Trends, Data Team

Themes	Categories	Examples of Codes
(5) Instruction must be purposeful and multifaceted.	Differentiated Instruction	Flexible Grouping, Modeling, Multisensory Approach
	Student Engagement	Technology, Interactive Tasks, Accessible and Engaging Books
	Instruction	Co-construction, Purposeful Instruction, Balance of standards and assessment
	Collaborative Learning	Student Collaboration, Class Discussions, Develop Comprehension Skills