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First- and Second-Grade Teachers' Use of Data-Driven Decision-Making for Guided Reading

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2024

Abstract

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by

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

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Abstract

The problem in this study was that first- and second-grade teachers are not using relevant and timely data, specifically running records, analysis of oral reading errors, self-correction rates, and word accuracy, as well as the student zone of proximal development (ZPD) in guided reading instruction. The purpose of this qualitative case study was to explore how first- and second-grade teachers use data-driven decision-making (DDDM) and ZPD to inform guided reading instruction. The conceptual frameworks in this study were DDDM and ZPD, as they collectively provided a lens for gathering rich data on instructional decision-making processes. Research questions addressed how first- and second-grade teachers used ZPD and DDDM, respectively, to plan/implement and determine next steps in guided reading lessons. Semistructured interview and lesson plan data were collected from 12 teachers who met the criteria and volunteered. Data were analyzed with an inductive approach, using a priori, open, and axial coding. Thematic findings indicating that participants individualized planning for guided reading based on students' ZPD by implementing specific teaching strategies that targeted their individualized needs. Additionally, teachers used DDDM to determine next steps in guided reading by using continuous data analysis to individualized instruction. Thus, the findings may support positive social change by informing administrators of specific teacher experiences in using DDDM to inform guided reading instruction and the benefits of providing growth opportunities and professional development for early childhood and elementary teachers to expand their collective and individual DDDM for guided reading instruction.

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Dedication

This dissertation is dedicated to my friends and family. Thank you for the encouragement to finish, prayers, love, and support. I share this with you.

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Chapter 1: Introduction to the Study

Reading is a complex activity requiring more than one assessment and continuous monitoring. Reading is also a social activity requiring an independent reader, a reading expert, and a learner. There is a need for consistent use of relevant and timely data to make decisions in first- and second-grade classrooms when planning guided reading. Student running records, analysis of oral reading errors, self-correction rates, and word accuracy, are important tools to inform the teacher of students' performance and help teachers plan for the next steps in guided reading (Fountas & Pinnell, 2017). Using this information, the teacher could determine students' strengths and weaknesses, then select strategies and texts to base instruction on students' strengths to remediate their weaknesses (Fountas & Pinnell, 2017).

Teachers can use the data collected from the Fountas and Pinnell Benchmark Assessment System (BAS) at the beginning of the year to determine students' comprehension, accuracy, fluency, and text levels. Once teachers collect these baseline data, they analyze the data and form initial guided reading groups (Fountas & Pinnell, 2017). Students with similar needs are grouped together based on baseline data and teachers select texts for them along the gradient of difficulty, which lets teachers analyze texts and determine if students are meeting grade-level expectations (Fountas & Pinnell, 2017, p. 295). During guided reading groups, students read on their instructional level (Fountas & Pinnell, 2017; Richardson, 2016). Once teachers form guided reading groups and choose texts, the teacher introduces the text, identifies the vocabulary and high-frequency words, and presents a story summary. Next, students read the text silently to

themselves while the teacher listens to each student read aloud a section of the story

(Fountas & Pinnell, 2017). After students read the text, a discussion occurs between the

students and the teacher about the text, with the teacher's guidance (Fountas & Pinnell,

2017). The teacher uses the text to make direct teaching points to move the students

forward in their learning and understanding (Fountas & Pinnell, 2017). Last, the teacher

provides explicit word work to help students become flexible problem solvers when

reading new texts (Fountas & Pinnell, 2017).

This process is cyclical in assessing student performance, grouping students, and

selecting appropriate instructional strategies and texts. Teachers have used this process to

create fluid groups based on continuous monitoring of students using formative

assessments, such as anecdotal records, running records, and conversations (Fountas &

Pinnell, 2017; Leithwood, 2019). The focus of the guided reading groups is to instruct

students within their zone of proximal development (ZPD), presenting texts that

challenge the reader, allowing for student problem-solving and increased student

proficiency (Fountas & Pinnell, 2017). This belief is based on Vygotsky's ZPD, an

indicator of the distance between what a student can learn independently and what they

can learn with teacher guidance (Smagorinsky, 2018). Instructing students within their

ZPD is necessary to ensure optimal learning occurs during instruction (Vygotsky, 1962).

ZPD is an essential component of guided reading instruction because its premise guides

the foundational aspect of guided reading (Smagorinsky, 2018; Vygotsky, 1962).

The purpose of this qualitative case study was to explore how first- and second-

grade teachers use data-driven decision-making (DDDM) and ZPD to inform guided

reading instruction This study's findings may result in positive social change by improving instruction and increasing student performance. Positive social change may occur through professional development centered around guided reading and data-driven instruction for first- and second-grade teachers.

In Chapter 1 I provide additional information on DDDM in guided reading. Chapter 1 also includes background information, the problem and purpose statements, the research questions (RQs), and the conceptual framework applied to the problem. Additionally, there is a description of the nature of the study; definitions that apply specifically to this study; the assumptions, scope and delimitations, and limitations; the significance of the study, and a chapter summary.

Background

In this study, I explored how first- and second-grade teachers used DDDM, specifically running records, analysis of oral reading errors, self-correction rates, and word accuracy, to inform the teacher of students' performance, as well as using ZPD to inform guided reading instruction. Guided reading, when paired with DDDM, allows teachers to make decisions based on summative and formative data (Fountas & Pinnell, 2016). Including DDDM in ZPD adds that missing element to strengthen guided reading.

DDDM happens through collecting, organizing, summarizing, analyzing, and synthesizing data (Leithwood, 2019). Guided reading follows the data-driven philosophy when teachers use the cyclical process of collecting data through running records, anecdotal notes, and conferencing (Fountas & Pinnell, 2017). The small group reading setting uses organized, summarized, and analyzed data to inform instruction. Early

childhood classrooms are rich in data and are a prime location for DDDM (Little et al., 2019). Early childhood classrooms are the foci of the research study due to their lack of external data and abundance of internal data. Examples of formative assessments include anecdotal records, conferences, and so forth that can drive daily instruction (Little et al., 2019).

In this study, I addressed a gap in practice and a gap in the literature about practice regarding DDDM and ZPD to inform guided reading for instructional purposes in first- and second grade classrooms. The gap in practice for this study was that first- and second-grade teachers were not using relevant and timely data, specifically, running records, analysis of oral reading errors, self-correction rates, and word accuracy, to inform the teacher of students' performance and inform their instruction. Instead, teachers used their judgment or generalized ideas even though the data were present (District Literacy Specialist, personal communication, January 7, 2020). Though teachers often feel confident in their judgment of students' abilities, they are not always accurate in judging student needs and should use relevant and timely data to drive instruction (Paleczek et al., 2017). A gap in the literature about practice also existed regarding ZPD in the early childhood setting. Teachers often have students reading at a level that is not challenging for them instead of their ZPD, which thwarts their problem-solving skills in decoding, word recognition, and comprehension and does not allow for continued academic growth (Fountas & Pinnell, 2017; Richardson, 2016). A gap in the literature that DDDM should be used to inform guided reading practices in early childhood also existed (Filderman et al., 2018). Additionally, a gap in the literature exists regarding ZPD

and reading instruction. Teachers not instructing students within their ZPD take away the

opportunity to "control the intricacies of their learning" (Fountas & Pinnell, 2017, p.

205). This study contributed to the gap in the existing literature by combining DDDM

and ZPD to improve reading instruction and students' reading performance. This research

builds on a gap in the literature about practice regarding DDDM to inform guided reading

for instructional purposes in first- and second-grade classrooms.

Problem Statement

The problem in this study was that first- and second-grade teachers are not using

relevant and timely data, specifically running records, analysis of oral reading errors,

self-correction rates, and word accuracy, as well as the student ZPD in guided reading

instruction. Relevant data based on the student's immediate need and timely data

collected in the classroom setting are part of a cyclical process in guided reading

instruction that involves assessing student performance, grouping students, and selecting

appropriate instructional strategies and texts (Fountas & Pinnell, 2016). During the

reading process, formative assessments, such as anecdotal notes and running records,

help to determine student errors (Fountas & Pinnell, 2017; Leithwood, 2019). Teachers

use these data to create fluid groups based on continuous monitoring of students'

performance. Teachers then select reading strategies based on word accuracy and

comprehension, formative assessment data, and state standards. Text characteristics such

as genre, text structure, content and theme, and ideas contribute to the instructional text

chosen, which should engage with a mixture of familiar and unknown words, include

illustrations to support the meaning of the text, and have clear and appropriate text length

and layout (Fountas & Pinnell, 2016). Using instructional-level texts to gather data on students' reading ability helps teachers determine the next steps for students in guided reading instruction (Fountas & Pinnell, 2016). Teachers who create intricate plans based on student needs enhanced guided reading and create a more meaningful learning experience for students (Young, 2018).

Teachers realize they must use data, but their use is often summative and does not provide the most specific and timely data needed to make daily teaching decisions. The time required to develop the plans using student data often keeps teachers from doing so (Young, 2018). However, decision-making based on students' formative and summative data alone is insufficient in guided reading since they do not help in determining students' instructional level. Adding ZPD to data collection in guided reading allows teachers who teach at a student's instructional level to know what students will need to do to read, write, and understand the text (Fountas & Pinnell, 2016). Teachers determine students' ZPD by setting learning goals and knowing which skills and knowledge they need to acquire to reach those goals. Once teachers have determined goals, they select learning tasks and activities and observe students completing tasks and activities to determine which skills and knowledge students have learned or need to learn. Teachers' awareness of the support and assistance needed within students' ZPD fosters foundational learning when planning guided reading (Filderman & Toste, 2017; Fountas & Pinnell, 2016) and allows teachers to teach students within their instructional reading level (Young, 2018). Learning within ZPD is close to emergence and will progress to independence (Vygotsky, 1962). Teachers who combine relevant and timely data and

ZPD in guided reading facilitate problem-solving, decision-making, and collaboration (Oslund et al., 2015). This study provided data on using relevant and timely data and ZPD combined to make decisions in first- and second-grade classrooms when planning guided reading.

Purpose of the Study

The purpose of this study was to explore how first- and second-grade teachers use DDDM and ZPD to inform guided reading instruction. I used a qualitative case study to research the problem in this study. I completed individual interviews and document reviews of first- and second-grade teachers' lesson plans in the data analysis. An understanding of how first- and second-grade teachers used data to inform guided reading instruction and which data types addressed the gap in practice.

Research Questions

The following RQs were addressed in this qualitative study of first- and second-grade teachers using DDDM and ZPD to inform their instructional efforts to improve student reading:

RQ 1: How do first- and second-grade teachers plan and implement a guided reading lesson based on children's ZPD?

RQ 2: How do first- and second-grade teachers use DDDM to determine the next steps in the guided reading lesson?

Conceptual Framework

The concepts that grounded this study included DDDM and ZPD. DDDM is a process educators use to collect and analyze data that can guide academic decisions for

students based on identified strengths and needs (Leithwood, 2010; Little et al., 2019). DDDM is essential for teachers to collect and synthesize data to meet student learning needs (Leithwood, 2019). Consistent use of DDDM and planning in guided reading was an area of concern in first- and second grade classrooms.

The critical elements of DDDM are data collection, organization, summarization, analysis, and synthesis (Leithwood, 2010). These elements connect through a cyclical process. When the teachers collect data, they must organize into categories or items (Fountas & Pinnell, 2017). Once data are organized, they are summarized into how they could be connected in terms of groups of students or individual student needs; as the data are summarized, they are also analyzed; these two steps are simultaneous in most cases. In some cases, the analysis goes into more depth depending on the type of analysis needed. For example, at specific benchmarks throughout the year, teachers analyze and triangulate various points of data related to reading. The last step is synthesis, where the teacher uses the data to determine the next steps for teaching. After synthesis, new information helps to construct groups from which new data collection begins, and the process of DDDM continues.

The key elements or constructs of ZPD are what a learner can do alone, what they can do with guidance, and what they cannot do. By scaffolding these elements, the teacher can determine what the learner can do. Instructing students within their ZPD allows them to expand their reading ability by moving along a continuum of growth set forth by Fountas and Pinnell to show where they began and were unable to do, to where they can achieve with guidance, to what they can do alone (Fountas & Pinnell, 2017).

Vygotsky's (1962) ZPD provides a bridge to individualized instruction, showing the distance between what a student can learn independently and what they can learn with teacher guidance (Smagorinsky, 2018). Instructing students within their ZPD is necessary to ensure optimal learning occurs during instruction (Vygotsky, 1962). ZPD is a positive way to extend student knowledge with the teacher's support (Fountas & Pinnell, 2017).

DDDM and ZPD connect through the cyclical collection of data that drives students' movement along the ZPD continuum. This conceptual framework guided the primary concepts used in the research questions as well as the problem and purpose statements. Vygotsky's ZPD and Leithwood's DDDM informed the research questions of the current study, which addressed how first- and second-grade teachers plan and implement a guided reading lesson based on children's ZPD and use DDDM to determine the next steps in the guided reading lesson. I also used the constructs of ZPD and DDDM to inform the development of the lesson plan and interview protocol. I used the guided reading lesson plans protocol to determine if guided reading instruction used ZPD and DDDM. The interview questions were semistructured, including how a student's ZPD was determined, how first- and second-grade teachers plan and implement a guided reading lesson based on the ZPD, and how teachers gather and use data to drive their decision-making during guided reading. Chapter 2 includes an in-depth analysis of the conceptual framework.

Nature of the Study

The nature of this study is a qualitative case study that took place in one rural school district using first- and second-grade teachers, representing only some rural first-

and second-grade teachers. Qualitative research is consistent with understanding first-and second-grade teachers' use of DDDM for guided reading. This qualitative research included a document review of lesson plans and teacher interviews to gather data regarding the research topics. Since this research focused on how teachers use DDDM and how they applied it to their classrooms and students, it is essential to seek their viewpoints. The qualitative research method is appropriate for this study because it allowed me to develop systematic techniques for research, determine appropriate coding of the data, define steps, and examine activities as they presented themselves without constraints to definitive numbers like other methods of research (Babbie, 2017).

A convivence sample included 12 first- and second-grade teachers from two elementary schools in the district. The teachers submitted 1-week of multilevel lesson plans for document review and completed a one-on-one interview. Multilevel sets of lesson plans included the weekly guided reading lesson plans written for various reading groups in a classroom. The multilevel lesson plans were based on reading levels and students' learning needs. In the study, I conducted a document review of lesson plans for all first- and second-grade teachers and semistructured interviews to determine teachers' use of DDDM in guided reading.

This study used an inductive approach to analyze the qualitative data, which allowed me to use raw data and convert them to more useful data sets (Rubin & Rubin, 2012). To begin data analysis, I used a priori codes, or predetermined coding. A priori codes are determined before data collection begins (Ravitch & Carl, 2016). I chose the a priori codes for this study based on the constructs of DDDM and ZPD. They included

student works with adult guidance, student works alone, data collection, data synthesis, meeting individual student needs, guiding academic decisions, and identifying student strengths and weaknesses. I used open coding after the a priori codes to search for repeated words, phrases, and ideas, and then I applied a label to those repetitions to give meaning to each group of similarities (Ravitch & Carl, 2016). I used axial coding to search for relationships among the open codes and closely examine the findings for patterns (Ravitch & Carl, 2016).

Definitions

This section lists terms and definitions specific to this qualitative study. I provided definitions for terms that may be unfamiliar or have multiple meanings. The definitions add clarity and understanding to the material presented for this research.

Comprehension: The act of understanding information read in various texts and synthesized before, during, and after the reading process (Reynolds & Daniel, 2018).

Data-driven decision-making (DDDM): A process educators use to collect and analyze data that will guide academic decisions for students based on their identified strengths and needs (Little et al., 2019).

Formative assessment: Multiple assessments for monitoring students' progress during the learning process throughout a unit of study (Förster et al., 2018).

Guided reading: Small group instruction in which a teacher supports students with similar learning goals (Fountas & Pinnell, 2017).

Instructional reading level: The level at which a student can read with the support of a teacher (Clay, 2005; Fountas & Pinnell, 2017).

Oral reading errors: Errors a student makes when reading aloud (Clay, 2005; Fountas & Pinnell, 2017).

Reading fluency rate: A student's ability to read with speed, accuracy, and proper expression, allowing the teacher to measure words read per minute (Clay, 2005; Fountas & Pinnell, 2017).

Reading Recovery: A school-based short-term reading intervention program for the lowest achieving students in literacy designed to dramatically reduce the number of first-grade students who have difficulty learning to read and write. The program lasts 12 to 20 weeks and allows students one-on-one intervention with a Reading Recovery-certified teacher to bring them to grade-level expectations in reading and writing (Clay, 2005).

Self-correction rates: The frequency that a student corrects an error during oral reading (Clay, 2005; Fountas & Pinnell, 2017).

Summative assessment: Assessments for learning that indicate how students mastered a unit of study (Rand, 2017).

Small group instruction: Instructing four to five students in a small setting to allow for increased focus from the teacher and a more individualized learning approach for the student (Fountas & Pinnell, 2017).

Word accuracy: The percentage of words a student reads correctly during oral reading (Clay, 2005; Fountas & Pinnell, 2017).

Zone of proximal development (ZPD): The theory by Lev Vygotsky that shows the distance between what students can learn through independent self-evaluation and

what they can learn through adult evaluation and guidance (Smagorinsky, 2018).

Assumptions

Assumptions in qualitative research are statements one considers true without testing or researching the idea (Ravitch & Carl, 2016). I assumed that all teachers used guided reading in first- and second-grade classrooms. Additional assumptions include those teachers were gathering and analyzing student data. I also assumed that participants answered honestly and openly during the semistructured interviews. Most interviewers assume participants will answer honestly and openly (Rubin & Rubin, 2012). These assumptions are necessary for the study because guided reading is the best practice for teaching reading. In addition, a district mandate is in place that requires teachers to use small group guided reading as well as administer Fountas and Pinnell assessments and collect and analyze data from those assessments.

Scope and Delimitations

The scope of the study was first- and second-grade teachers in a southern state who use guided reading, ZPD, and DDDM. I chose this research topic because first and second graders at the research sites were not making adequate reading progress based on the district's use of Fountas and Pinnell's assessment for first and second graders. I delimited this study to 12 participants teaching first and second grade in a rural early childhood class. The study involved a document review of lesson plans and semistructured interviews of first- and second-grade teachers. Populations excluded from this study include all other early childhood and elementary grades.

Vygotsky's (1962) ZPD and Leithwood's (2019) DDDM theories were the

frameworks that grounded this study. I considered Bandura's (1977) theory of self-efficacy for this study, which focuses on an individual's view of their abilities. His theory of self-efficacy centered on one's personal beliefs about their ability to learn (Bandura, 1977). Bandura further explained that past experiences influence self-efficacy on success and are transferable to various learning opportunities. But I did not explore teachers' personal beliefs regarding their ability to learn, their past experiences with success, or their learning opportunities. This study determined that the use of DDDM was relevant to the theories of Leithwood's (2019) DDDM and Vygotsky's (1962) ZPD. These theories are related to how teachers make instructional decisions for students in guided reading classes as opposed to the teachers' professional beliefs, experiences, or learning opportunities.

The study may be transferable to other settings. Transferability refers to the application of findings to different settings while maintaining context-specific richness (Ravitch & Carl, 2016, p. 189). The results of this study could be transferable to educators who (a) teach early childhood education, specifically first and second grade, (b) teach in a rural school setting, and (c) have a specific interest in guided reading and data-driven instruction. I ensured transferability by providing valid results, clear and concise descriptions of the research process, guided reading lesson plans protocol, interview protocol, the context of the study, and limitations and delimitations. Valid results provided transferability by clearly and concisely describing the research process and study context. Researchers who may want to apply the results of this study to their setting, will use these descriptions of clarity and lack of obscurity for their research.

Limitations

Limitations of a study are weaknesses or problems that become known to the researcher during the research process and or data analysis (Creswell, 2017). A limitation of this study is the small sample population. Using a small sample population and setting may be a limitation due to the unique characteristics of the district and the teachers (Banditvilai, 2016). I addressed this limitation by increasing the sample to include additional early childhood teachers outside of first and second grade or other first- and second-grade teachers in neighboring districts. However, I conducted the case study in one rural school district using first- and second-grade teachers, which may only represent some rural first- and second-grade teachers. In addition, using the perspectives of only first- and second-grade teachers is a limitation. This was a limitation because using only two grade levels within the early childhood community confined points of view to two grade levels rather than including experiences from all early childhood grades. I addressed this limitation by including teachers of early childhood grades or additional first- and second-grade teachers in neighboring districts. Limitations also included the sample and sample size in this study because they did not include all first- and second grades or all early childhood students. These limitations affected the outcome of the data because using a smaller and restricted sample may only represent some early childhood teachers (Ravitch & Carl, 2016).

Another area for improvement of the study is using quantitative data. This is a limitation because quantitative data are without bias, meaning they are strictly numerical data (Ravitch & Carl, 2016), while qualitative data can express opinions through the

outside bias of the researcher completing the data analysis (Ravitch & Carl, 2016). A quantitative research method is not appropriate when exploring teachers' perceptions, experiences, and understandings of a specific phenomenon. Additionally, limitations of qualitative data include the acts of document review and interviewing because they give way to human error, even if unintentional, and could have impacted the context, setting, and findings of this study (Ravitch & Carl, 2016). A review of planned instruction might differ from what occurred in the lesson. However, planning for instruction is one of the steps in the DDDM process, and ensuring a follow-up interview provided more information on the teachers' understanding of the DDDM process and how they incorporated it into instruction. I addressed this limitation using a document review of the lesson plans and interview protocols to reduce potential errors in data collection. In addition, I followed the steps outlined for analysis in each protocol to ensure the accuracy of the findings. I put additional focus on records for document reviews of lesson plans, and interviews to ensure neutrality and the constant emphasis on remaining unbiased (Ravitch & Carl, 2016).

Potential biases influencing the study's outcome included a personal bias toward teaching reading to the target population and a personal bias toward ideas on data-driven instruction to the target population (see Ravitch & Carl, 2016). My bias on teaching reading to the target population includes personal philosophies on teaching guided reading, the value of data, and the importance of instructing students within their ZPD. My beliefs on data-driven instruction and its delivery to the target population included using daily formative assessments to drive guided reading instruction. To address the

issue of my personal bias, I verified the data I collected with more data sources and checked for the data collected with alternative explanations (Ravitch & Carl, 2016). Additionally, I used the guided reading lesson plans protocol to corroborate the findings from the interview data. Chapter 3 includes further description of this procedure.

Significance

The study can advance knowledge in the field of education through the study of first- and second-grade teachers' use of relevant and timely data and ZPD to make decisions in early childhood classrooms when planning guided reading. In this study, I addressed a local problem by focusing on how first- and second-grade teachers use data to inform guided reading instruction. This study is unique because it addressed a gap in the literature about the practice of using DDDM to inform guided reading instruction (Richardson, 2016). Guided reading is well-researched; therefore, there is an understanding of how early childhood classrooms use guided reading for instructional purposes (Richardson, 2016). But t results of this study provide insight into how DDDM influences student literacy learning in first- and second grade classrooms. Additional findings from this study assisted first- and second-grade teachers in using relevant and timely data to plan for guided reading instruction.

The study could advance student performance by determining that consistent use of relevant and timely data and ZPD to make decisions in first- and second grade classrooms when planning guided reading could increase student performance in reading. Early childhood teachers need to use relevant and timely data to evaluate students' needs and provide daily instruction (Little et al., 2019). These potential student performance

advancements are possible positive effects of using data-driven instruction by teachers.

This study is also significant in the local setting. Because of this study, positive social change may occur through practical recommendations, such as professional development or districtwide guided reading policies, for all teachers and stakeholders. District administrators and district experts would provide the change in reading. Administrators and teachers may see increased benefits through increased student performance in reading and higher rates of teacher implementation of DDDM in guided reading with fidelity. Potential student growth benefits both administrators and teachers, both short and long-term. Student growth allows for possible higher graduation rates, student engagement, and application of reading skills in all content areas throughout grade levels (Little et al., 2019).

Summary

In this case study I used the DDDM and ZPD frameworks to analyze how teachers informed guided reading instruction. The study focused on instruction in two rural schools in a southern state. Questions answered through the study included how first- and second-grade teachers early plan and implement a guided reading lesson based on students' ZPD and how first and second grade use DDDM to determine the next steps in the guided reading lesson. Data collection for this study occurred through document reviews of lesson plans and semistructured interviews. Chapter 2 contains an in-depth description of the conceptual frameworks and an exhaustive review of the literature.

Chapter 2: Literature Review

This chapter provides a review of the literature related to the phenomena of first- and second-grade teachers' use of DDDM in guided reading instruction. Although research exists about teachers' use of DDDM in guided reading instruction in elementary grades, there is a need for additional research on first- and second-grade teachers' use of DDDM in guided reading. The problem in this study was that first- and second-grade teachers are not using relevant and timely data, specifically running records, analysis of oral reading errors, self-correction rates, and word accuracy, as well as the student ZPD in guided reading instruction. The purpose of this study was to explore how first- and second-grade teachers use DDDM and ZPD to inform guided reading instruction. Current literature establishes the relevance of this problem through the work of Fountas and Pinnell (2016), who stated that data collected by teachers play a significant role in guided reading instruction. Since the research topic is so current, there are limited resources, articles, and dissertations. After contacting a Walden librarian, to date, I only found 20 articles that fit the topic.

Literature Search Strategy

The literature review for this study includes an array of words and phrases associated with the study's phenomenon of first- and second-grade teachers' use of DDDM in guided reading which steered the purpose statement, problem statement, and research questions. I limited the initial search to the databases in the Walden University library. After an exhaustive search of the Walden Library, I extended to Google Scholar for additional peer-reviewed articles and journals. I filtered all research articles, books,

and journals from 2016 to 2023. I made an exception to those articles relating to the

conceptual framework where the article can be more than 5 years old. I only considered

relevant peer-reviewed articles for this study's literature review.

The databases and websites used to gather research material included EBSCO

Open Access Journals, Education Source, ERIC, Heinemann Press, International Literacy

Association, MIT Press, ProQuest Central, SAGE Premier, Scholastic Inc., Science

Direct Subject collections, Taylor & Francis, Wallace Foundation, Wiley Online, ed.gov,

ed.dc.gov, and ejel.org. Phrases used in Boolean searches included *data-driven*

instruction AND early childhood, data-driven instruction AND Vygotsky, data-driven

instruction AND ZPD, guided reading AND data-driven instruction, guided reading AND

early childhood, guided reading AND ZPD, and *data-driven instruction AND guided*

reading AND early childhood. Keywords and combinations of key terms used in Boolean

searches included *constructivism, data-driven instruction, early childhood, education,*

educational practices, first and second grade, Fountas and Pinnell, instruction,

instructional strategies, levels, literacy, reading, reading groups, theory of social

development, Vygotsky, ZPD, and *zone of proximal development.* I only selected articles

that addressed the conceptual framework, problem statement, and purpose statement that

had specific detail identified as relevant to their findings.

Conceptual Framework

This framework is comprised of two concepts: ZPD and DDDM. ZPD, one of

Vygotsky's (1962) social development theory (SDT) components guided this study

(Cleverism, 2019). ZPD shows the distance between what students can learn through

independent self-evaluation and what they can learn through adult evaluation and guidance (Smagorinsky, 2018). The distance or gap (i.e., ZPD) is critical to all learners because this is where learning occurs. Teachers who use students' ZPD to indicate what a learner can do alone, what they can do with guidance, and what they cannot do to design learning experiences for students meet student's individual learning needs (Cleverism, 2019; Vygotsky, 1962). For instance, teachers determine students' ZPD in guided reading to introduce them to new learning. Through this process, the teacher uses student data to determine what the students can do alone, what additional guidance they need, and what they cannot do (Vygotsky, 1962). Instruction tailored to student's individual needs within their ZPD in the guided reading setting provides adequate opportunities for teachers to make relevant and timely instructional decisions (Davis et al., 2019). Teachers using learner knowledge and students' ZPD are more likely to be effective in guided reading. The first step of this iterative process is for teachers to identify their students' ZPD then make instructional decisions and form guided reading groups to teach skills. As guided reading groups progress, teachers continue to draw upon students' data using DDDM to restructure guided reading groups and alter reading instruction.

The second concept, DDDM, is the systematic, cyclical process of using data to identify students' strengths and weaknesses and apply data findings to teaching practice, which allows for collecting, organizing, summarizing, analyzing, and synthesizing data into information to make decisions (Leithwood, 2019). Data collection may include student reading levels, reading fluency levels, comprehension scores, oral reading errors, self-correction rates, and word accuracy levels. The next step is for teachers to organize

and summarize all the data collected on student reading performance. The teacher completes the analysis and synthesis of the data. First, the individual teacher analyzes and synthesizes the data before meeting with the administrator to discuss students, their progress, and how they used data to drive daily instruction. Next, the analysis and synthesis meeting with the administration focuses on students' needs based on the data collected. Administrators and teachers discuss the continuous collection and assessment of reading data, such as student running records, analysis of oral reading errors, self-correction rates, and word accuracy, and how these data not only provide complete students' profiles but also a plan for making instructional decisions (Fountas & Pinnell, 2013).

The two conceptual frameworks used in the study, DDDM and ZPD, connect to the purpose of the study, which is to explore how first- and second-grade teachers use DDDM and ZPD to inform guided reading instruction. When teachers use guided reading in the classroom, they use students' ZPD or instructional level to teach them. Students' ZPD and instructional levels are determined using formative assessments such as the Fountas and Pinnell's Benchmark Assessment. The accuracy rate of the reading and the comprehension score based on answers to select questions about the story provide the students instructional levels (Fountas & Pinnell, 2017). DDDM is part of this cyclical process and relates to the teachers' use of running records, conversations with students, and anecdotal notes to show student progress (Fountas & Pinnell, 2017). Using this information, teachers can decide which skills and strategies contribute to students' successful reading performance and which strategies students do not use concerning a

text's instructional level (Fountas & Pinnell, 2017). This process helps teachers determine if a student's text level has become independent, remains at the instructional level, or is at the frustration level. The intent of using DDDM within the guided reading process is to use formative data to collect student data at set times throughout the school year. These data help maintain optimal individual ZPD levels for students and to develop guided reading groups, which are fluid and data-driven and based on individual student needs.

<center>**Literature Review Related to Key Concepts and Variable**</center>

Zone of Proximal Development

Multiple research studies have applied and articulated the use of students' ZPD in reading. Clara (2017) aimed to explore a new interpretation of Vygotsky's theories of cultural development closely related to his writings, indicating that instruction is a foundation for conceptual development only when the students can make meaning from a nonspontaneous relationship sustained over a long period. Reynolds and Daniel (2018) discussed the examination of how scaffolding and ZPD affect reading comprehension. The study findings showed that returning to contingent scaffolding would allow a greater focus on how students develop comprehension skills with teacher support in their ZPD. Sadeghi et al. (2016) described their study as determining how using Vygotsky's sociocultural theory and ZPD may influence teaching approaches to students in foreign/second language classrooms. They found that using Vygotsky's ZPD allowed for shadow-reading to make meaningful interaction and comprehension gains among learners Research settings ranged from early childhood classrooms in the United States to university language learners in Iran.

Additional research on specific contextual factors regarding how students respond when questioned within their ZPD was determine to be a need. These researchers indicated that ZPD relates to reading comprehension, but the field is broad and I was not able to narrow it to my potential research area.

Additional research on ZPD and English as a second oral language was available. Sadeghi et al. (2016) described their study as determining how using Vygotsky's sociocultural theory and ZPD may influence teaching approaches to students in foreign/second language classrooms. The setting of this study was the Islamic Azad University of Khorasgan and Falvarjan, Isfahan, Iran. The study sample included 52 junior English as a foreign-language learners from two universities. Participants received random assignments to an experimental or control group for the study. The study showed that shadow-reading significantly influenced learners' comprehension. The results also found that using Vygotsky's ZPD allowed for shadow-reading to make meaningful interaction and comprehension gains among learners. While this study is also relevant for ZPD, it does not include students in the United States or students within the scope of my research.

Additional research on ZPD, which elaborated on the concept of ZPD originated by Vygotsky in 1962. Clara's (2017) research aimed to explore a new interpretation of Vygotsky's theories of cultural development closely related to his writings. This research further defines how and why instruction pushes development and determines that ZPD can be a non-spontaneous concept. This study has no setting or sample but is based on examining shared interpretations of various notions of ZPD and how they compare with

Vygotsky's initial interpretation. Clara found that instruction is a foundation for conceptual development only when the students can make meaning from a nonspontaneous relationship sustained over a long period. This finding indicates that ZPD is learning and development.

These studies show that ZPD is a researched topic relating to reading comprehension, communication for English as a second language students in reading, and additional research expounding on Vygotsky's original work. My research addressed a gap in practice and a gap in the literature about the practice. I explored how teachers use ZPD to make informed decisions about guided reading instruction and whether there is a connection between ZPD and DDM.

DDDM

As with ZPD, DDDM researchers applied and articulated in multiple empirical research studies. Filderman et al. (2018) used DDDM to discuss reading interventions for the struggling reader. Ardoin et al. (2016) found that when using DDDM, consistent gains occur in reading rate, expression, and accuracy in struggling readers. Gersten et al. (2017) found that when teachers explicitly used data to make decisions to adjust instruction for individual student levels, reading in the intervention setting improved.

Ardoin et al. (2016) described their study as examining the extent to which repeated readings result in generalized improvements in students' reading accuracy, rate, prosody, and comprehension. The setting of this study was two elementary schools in Georgia. The sample included 168 second-grade students consisting of 78 boys and 90 girls. The study showed that students grew substantially using repeated readings,

especially for the lower achievement group. The ultimate findings were that repeated and wide readings in various texts resulted in greater achievements than traditional classroom reading practice.

Filderman et al. (2018) described the purpose of their meta-analysis study as one that examined studies featuring reading interventions that utilized DDDM for struggling readers and the characteristics that supported those interventions. The setting of this study was in various locations around the United States The sample included 15 studies of reading interventions that incorporated DDDM for struggling readers in Grades K-12. The study showed that DDDM's primary use in reading is for code-focused instruction and that there needs to be more emphasis placed on how using DDDM for reading comprehension instruction. The results also found that there is a need for more research to determine the best way to derive data for DDDM in reading intervention and the standardized data collection or mastery measures data collection.

Gersten et al. (2017) reviewed previous studies regarding 20 interventions deemed to meet the requirements of early reading intervention support. This review only discussed interventions used in Grades 1-3 in the United States from 2002-2014. Most of the sample were at-risk, general education students who received reading intervention and were not English as second oral language or special education.

Researchers have also used DDDM to discuss how preservice teachers can learn to use and better equip themselves for classroom use. The researchers found that using DDDM with preservice teachers provided consistent opportunities for teachers to learn how to use in-the-moment data to guide instruction, taught teachers how to identify

students' strengths and weaknesses, and how to feel empowered to make these changes using DDDM as a guide when in the classroom setting (Davis et al., 2019; Dodman et al., 2019).

Davis et al. (2019) noted that preservice teachers used DDDM to learn about in-the-moment teaching during guided reading. This research showed the importance of the need for preservice teachers to identify students' strengths and individual needs to plan and direct instruction. Additional findings showed that guided reading may be highly effective if preservice teachers use what students know and their ZPD to make appropriate guided reading decisions.

Dodman et al. (2019) researched the use of audits as a DDDM tool for pre-service teachers to help with educational change and help teachers feel empowered to address school-based opportunity gaps. The setting of this study was in courses of PK-12 preservice teachers in private and public universities. These students were working toward their master's degree in curriculum and instruction in the United States Universities included online participation from 30 candidates, 27 from the United States and one from Kuwait, Oman, and the United Arab Emirates. The study sample included 22 Caucasian females, four Caucasian males, two African-American females, one Hispanic male, and one Arab-American female. This study is an example of how using DDDM in a preservice setting may occur in guided reading or other contextual settings. The study builds on previous research in which schools with supportive environments and DDDM positively changed teachers' practices. As a result of completing the equity audit, participants found a new commitment to being equity-oriented teacher leaders and

agents of change in their schools.

Guided Reading and Data Use

Multiple research studies applied and articulated the connection between guided reading and data use. Young (2018) investigated the use of data within the guided reading setting and determined that by coupling these two ideas greater learning opportunities for students occurred. Lipp and Helfrich (2016) found that using data within guided reading allowed for opportunities to individualize student instruction and determine students' reading needs more accurately. Additionally, Paleczek et al. (2017) found that combining DDDM and guided reading provides opportunities for teachers to learn how to use this model to drive instruction, though many teachers felt unprepared to interpret data outside of a set guided reading assessment model.

Young (2018) completed a quasi-experimental study on two approaches to guided reading, independent reading, and strategy use. The research took place on 79 second-grade students who were pre- and post-tested on the Developmental Reading Assessment (DRA). Using a data-driven program, such as the Developmental Reading Assessment within the guided reading setting, provided teachers with the opportunity for DDDM. The research shows that both groups experienced substantial effects, but the treatment group showed much higher effects. The findings suggest increased emphasis on guided reading can significantly impact second-grade students' reading ability. This research is related to my study because it shows how a mirror program to Fountas and Pinnell, DRA, can provide opportunities for DDDM in the reading classroom and is pertinent to increase student achievement.

Lipp and Helfrich (2016) discussed how data use can influence guided reading and support students based on strategic teaching planned from ongoing assessments in the Reading Recovery Program. The setting of this study takes place in primary-grade classrooms in Ohio. The findings of this study show that the use of DDDM when teaching and planning for guided reading can provide constant support for students reading needs. Additionally, if teachers learn the data-driven components of guided reading provided through the Reading Recovery program, more opportunities for learning and using DDDM can occur for teachers.

Paleczek et al. (2017) investigated the accuracy and judgment of teachers' use of data in assessment for reading instruction. The setting of this study was in Austria. The study's findings show that teacher judgment accuracy based on data gathered from reading comprehension and decoding in grades two and three increased over time. These data were more accurate after 1 year of working with or for students with special needs. Additionally, teachers made better judgments or assessments about reading comprehension based on data rather than student decoding skills. This research is related to my study because it highlights areas where teachers are not skilled in making data-informed decisions in reading.

Professional Development for Guided Reading

Research for DDDM and guided reading in professional development was unavailable due to the limited research on a new topic in this field. However, research was available on the need for professional development in DDDM for teachers, which aligned with this study. Research on the use of DDDM was available and showed a need

for professional development for underprepared teachers in multiple sectors (Glover, 2017). Researchers found that teachers often felt underprepared for using data in the reading classroom. Additionally, they found that teachers often needed to learn how to properly collect, analyze, and interpret data to drive instruction. Lastly, researchers found that teachers felt their accuracy and judgment when working with data to determine the next steps for students were not at the level they should be for meaningful data-driven instruction (Förster et al., 2018; Glover, 2017).

Förster et al. (2018) investigated the effects of providing teachers with data regarding students' learning progress and differentiated teaching material so that teachers can learn to adapt instruction to individual needs in general education. The study's findings showed that using data to drive instruction in third-grade classrooms increased reading fluency but not comprehension. This research shows a need for professional development for teachers in reading instruction, data usage, and data interpretation. There was also an increase seen in reaching achievement for students. This research is related to my study because it shows merit in data-based decision-making for third-grade students in reading fluency. Additionally, this study is related to my research because it shows that while teachers know that data-based decision-making is essential, there is a need for additional support from professional development.

Glover (2017) investigated the underlying guiding theory, key components, and empirical support for the data-driven instructional coaching model. The study suggests that administrators provided professional development to teachers for reading instruction, data usage, and data interpretation, and through these elements, reading achievement

increased. The study's findings show that professional development in reading and data usage can foster growth in reading achievement.

Early Childhood Reading Instruction and Data Use

Research on early childhood reading instruction and DDDM indicates that early intervention and skilled instructors are vital to helping students make significant gains in reading. Leu and Maykel (2016) found that using text early is essential for the developing reader. Additionally, Oslund et al. (2015) discovered that specific assessments can identify students in need in the early childhood setting. This identification helps formulate a particular reading plan to remediate students early in their careers.

Leu and Maykel (2016) investigated using in-hand texts in early childhood classrooms to help students master guided reading skills. The setting of the study was in the United States and was based on nationally normed NAEP test data. The study's findings showed that using hard copies of the text in guided reading can help students learn to navigate text better than using online media for guided reading. This research is related to my study because it shows that using proper reading materials is essential when making decisions for your students in guided reading.

Oslund et al. (2015) investigated whether curriculum-embedded measures (CEM) given to kindergarten students would predict reading difficulties and determine the at-risk status of students in first and second grade. The setting of this study took place in three unnamed states or cohorts. The study's findings on curriculum-embedded progress monitoring help make data-driven decisions 1 year after administering the CEM. In subsequent years of the longitudinal study, the data became less accurate over the

longitudinal span. This research is related to my study because it shows how DDDM can determine a learning plan to address specific reading needs identified in kindergarten. Researchers collected data for 2 additional years to decide whether to continue or alter the learning plan.

Guided Reading and Assessment of Student Needs

Policastro (2017) investigated the time spent with the teacher in the guided reading setting yielded promising results for students. Reading achievement increased as the amount of instructional time increased with the teacher. Additionally, Young et al. (2015) found that as students spend more time in guided reading groups, the teacher yields more time to gain information from anecdotal notes, formative assessments, and conferencing with students. Researchers found that students experienced positive benefits the more time they spent in guided reading groups with their teacher because of one-on-one instruction, individualized instruction, and the ability of the teacher to use data gained in the guided reading session to drive the students' instruction (Policastro, 2017; Young et al., 2015).

Policastro (2017) investigated how extended time with the teacher during guided reading offers more time to assess students in an ongoing manner for fluency. The study's findings show that using shared talk during guided reading and the balanced literacy block allows students to engage and invest in the language in multiple ways. This research is related to my study because it shows that guided reading will enable students to engage with the text and increase language development. Through this opportunity, the teacher can extend her use of DDDM to incorporate all these areas of literacy.

Young et al. (2015) investigated the need for teachers to take time to assess students in an ongoing manner for reading fluency and comprehension. The study's findings show that the Reading Together Program increases reading expression, reading rate, and overall reading scores for third- to fifth-grade students. This research is indirectly related to my study because it mirrors the components of guided reading and shows success in DDDM within a reading program.

Guided reading, when coupled with DDDM, centers on the idea that people make decisions based on summative and formative data (Fountas & Pinnell, 2016; Leithwood, 2019). This study will address a gap in the literature about practice as well as a gap in the literature about practice regarding DDDM to inform guided reading for instructional purposes in first- and second grade classrooms (Richardson, 2016). Louis et al. (2010) stated that early childhood classrooms are rich in data, making them a key location for DDDM. The research may provide findings significant to DDDM and guided reading for the first- and second grade education community. ZPD and DDDM guide this study by informing the problem, purpose, research questions, literature review, and data collection and analysis.

Summary and Conclusions

The research found in this chapter shows the importance of ZPD and DDDM. When researched separately, there is information on each topic outside the current study. Major themes found in the research include ZPD, DDDM, guided reading and data use, professional development within guided reading, early childhood, guided reading and assessment use, and guided reading. These themes are present throughout the research

and provide a foundation for the beginning of this study. While there is minimal research on this topic, it solidifies the idea that this is an innovative topic for research by looking at the intersection of ZPD and DDDM in first- and second grade settings. Chapter 3 provides more information regarding the methodology for the research study.

Chapter 3: Research Method

The purpose of this study was to explore how first- and second-grade teachers use DDDM and ZPD to inform guided reading instruction. This chapter is an overview of the study's research design and rationale; procedures for participant recruitment and selection; data collection and analysis methods; strategies for trustworthiness including credibility, transferability, dependability, and confirmability; and ethical processes and practices.

Research Design and Rationale

The central concept that is the focus of this study is first- and second-grade teachers' use of instructional practices for guided reading and DDDM. First- and second grade classroom teachers were not consistently using relevant and timely data and ZPD to make decisions when planning guided reading. This problem raised questions about how teachers are planning and implementing guided reading and how teachers are using DDDM to determine the next steps for guided reading. I used the following research questions to conduct my study:

- RQ 1: How do first- and second-grade teachers plan and implement a guided reading lesson based on students' ZPD?

- RQ 2: How do first and second grade teachers use DDDM to determine the next steps in the guided reading lesson?

Specifically, I examined the instructional practices of first- and second-grade teachers in a rural Southern state by applying Vygotsky's ZPD framework and Leithwood's framework for DDDM that addresses the problem.

Research Tradition

Qualitative case study research is an in-depth examination of phenomena within a bounded setting (Babbie, 2017). This study was a qualitative case study because it allowed for an in-depth analysis of first- and second-grade teachers' use of instructional practices for guided reading and using data to drive instructional decisions within a bounded setting. Case studies help add to an existing research base, which can assist in understanding the problem from the stakeholders' viewpoint (Stake, 1995; Yazan, 2015). This study added to the current research base that will assist in understanding why first- and second-grade classrooms are not consistently using relevant and timely data to make decisions when planning guided reading.

I used a qualitative case study design to gather information through document review of lesson plans and semistructured interviews (Stake, 1995; Sullivan & Sargeant, 2011; Yazan, 2015). This study utilized 1-week of teacher lesson plans reviewed based on the guided reading lesson plans protocol. This review helped facilitate and create questions that added to the depth and personalization of the semistructured interviews that each participant completed about how they used guided reading. This qualitative case study provided additional data to add to the literature by illustrating viewpoints and understandings of first- and second-grade teachers, an underrepresented population in previous research.

Justification

I chose a qualitative case study due to the nature of this study. The study required an in-depth view of individual lesson plans and follow-up interviews with each

participant. The semistructured interviews allowed for a tailored set of follow-up questions with participants on how they used guided reading in their lesson plans. Using a qualitative case study was the most effective choice because I could focus on each participant, lesson plans, and in-depth interviews. A broad-scope study could not have achieved this depth.

I considered other qualitative methods such as phenomenology, grounded theory, narrative, and historical tradition but did not choose them for this study. I discounted these three qualitative methods due to a lack of coherence to the study's framework and the notion of prolonged engagement in the field. Phenomenology requires at least a year's data collection. I did not choose grounded theory due to its constructs of theory development, and grounded theory does not align with the purpose of my study. I did not choose narrative because of the necessity of prolonged engagement in the field and involvement in telling people's stories in their own words. The historical tradition also involves examining the past to draw conclusions (Ravitch & Carl, 2016).

Role of the Researcher

In this study, my primary role was to conduct all aspects of data collection and analysis ethically. I conducted a document review of lesson plans and interviews with teachers who met the criteria for the role of participant.

My Role

I am a literacy coach, and my experiences and beliefs about using DDDM could have influenced the study's outcomes. I believe in teaching reading with a balanced literacy approach. Students need opportunities to engage with reading in a whole group

setting, interactive read-aloud, small group setting, and independent reading. DDDM is the basis of all reading instruction for students. Collection of data through daily conversation, running records, anecdotal notes, and student-written reflections are foundational. My beliefs on DDDM to guide instruction include using daily formative assessments to drive guided reading instruction. To address the issue of my personal bias, I kept a reflexive journal to record my thoughts and decisions and my rationale for making those decisions as I progressed through the research process (Lincoln & Guba, 1985).

Relationships

I had no supervisory role with any of the participants at any of the campuses in the study. I served as a literacy coach at one of the schools in the district, but I did not conduct research at my campus, only the remaining two campuses. Additionally, in my state, the role of the literacy coach is not supervisory. As a literacy coach, I collaborated with teachers through coaching cycles to select and model high-quality instructional strategies in reading and writing. Collaboration occurs when teachers and the coach discuss a specific need of the teacher, such as instructional ideas for reading or writing, and then create possible strategies and lessons that the teacher may use. The teacher may request that the coach model these strategies by conducting a lesson in the classroom.

In my building, I had a professional relationship with the first- and second-grade teachers through the Reading Recovery program. In schools where I serve as the literacy coach, I routinely contacted teachers to remove and return students for Reading Recovery lessons. I shared information such as reading level and specific strategies or skills for

weekly focus. Ninety-five percent of my Reading Recovery time involved student interaction, not teacher interaction.

Researcher Bias and Ethical Concerns

While bias is in all studies, the researcher must be ethically aware of these issues and take all necessary measures to avoid bias as much as possible (Babbie, 2017). Potential personal biases for this study included my thoughts on the teaching of guided reading, how data drives instruction, and how to effectively use students' ZPD to engage their learning. I avoided these three potential biases by putting barriers in place to be aware of my personal beliefs and concerns related to the instructional practices and approaches related to guided reading, DDDM, and ZPD. These barriers included strict protocols for document review of lesson plans and teacher interviews and strict interviewer and interviewee guidelines for all participants and myself. I recorded interviews to maintain integrity. I maintained a professional relationship with the participants by using the key behaviors of a researcher (see Ravitch & Carl, 2016). These behaviors included selecting a neutral setting, clearly explaining the purpose of the interview, providing, and reviewing informed consent with the interviewee, requesting consent to record the interviews, and reviewing and maintaining strict protocols for document review of lesson plans and interviews so that the topics are inclusive only of ZPD and DDDM (see Rubin & Rubin, 2012). There were no incentives used during this study.

Methodology

Participant Selection

I used purposeful sampling to select 12 first- and second-grade teachers in this study. Due to the nature of this study, I used a qualitative case study and a small purposeful sample. This sample allowed for greater depth with each participant when reviewing their lesson plans and adding individualized follow-up questions to their semistructured interviews.

Population

The population for this study included individuals from two schools from a rural school district in the Southeastern United States. The schools in the study were Title I schools that used guided reading practices in their curriculum. Additionally, these schools use Reading Recovery in their first-grade classrooms for intervention with students. Second-grade intervention students use this intervention method and influence guided reading.

Sampling Strategy

I used a purposeful sampling method to select potential participants from the population. This strategy was appropriate because it provides context-rich and detailed accounts of specific populations and locations (Ravitch & Carl, 2016, p. 128). Qualitative research uses small sample numbers because this type of research involves exploring a problem in-depth rather than across a large population, which is breadth (Ravitch & Carl, 2016).

Participant Selection Criteria & Verification

To ensure that all participants met the required criteria, the following procedures took place before the interview: Teachers (a) verified that they met the criteria by completing the checklist on the informed consent attached to the email invitation to participate and (b) answered the same criteria questions. From this population, any teacher with the following qualities was eligible to participate in this study:

- Guided reading teacher

- First- or second-grade teacher

- 1 or more year of teaching experience

- Certified and licensed teacher

Justification of Desired Participants

Due to the size of the rural school district and the choice to only use two of the three elementary schools, there were only 16 first- and second-grade teachers in the population. I justified the sample based on the use of a qualitative case study. In research practice, sample sizes are limited by the available resources whether it is a primary justification for the sample size in a study, or a secondary justification (Lakens, 2022). In this study I chose to go in-depth with participants to determine how first- and second-grade teachers plan and implement guided reading lessons based on children's ZPD.

Procedures for Gaining Access to Participants

I contacted building administrators and potential participants once I had permission from Walden's Institutional Review Board and the district's research department (approval no. 05-26-21-0674248). I retrieved administration and teacher

contact information, work phone numbers, and email addresses from the school's website. I contacted the administrators on each campus via phone and email to summarize the conversation. During the conversation, I introduced myself and shared how the school district and how campus identification occurred for the study. Additionally, I requested permission to talk with first- and second-grade teachers to interview them via Zoom regarding guided reading lessons. I discussed that once the research was complete, I would share information regarding specific timelines for my research and access to the findings. I discussed the confidentiality of the study.

I contacted teachers via their direct district school phone number, obtained via the school website, to determine their eligibility based on the criteria and willingness to participate. A follow-up email provided an invitation to participate, a copy of the letter of consent, the study dates, and how their participation assisted in creating change in guided reading in the first- and second grade setting. Teachers had 1 week to return the email invitation to participate in the study. Acceptance was in the form of an email stating, "Yes, I am willing to participate in the study."

Instrumentation

In this section, I describe the tools, their creation, and their sufficiency in collecting data to address the RQs. In the study, I gathered data with two research tools that I created: a guided reading lesson plans protocol (Appendix A) and an interview protocol (Appendix B). I used the data collection instruments to ensure that each RQ had an answer by exploring the phenomenon of guided reading based on the work of Vygotsky's (1962) ZPD model, Leithwood's (2019) DDDM model, and guided reading. I

created the guided reading lesson plans protocol to glean data from participants'
documents and to answer each RQ. Interview data featured how teachers planned and
implemented guided reading lessons based on children's ZPD and how teachers used
DDDM to determine the next steps in the following guided reading lesson.

Guided Reading Lesson Plans Protocol

The guided reading lesson plans protocol included questions outlining the
participants' process during lesson planning and how they incorporated ZPD and DDDM.
The guided reading lesson plans protocol breaks questions into three sections: one with
questions about using guided reading practices, a second about using ZPD, and a third
about using DDDM. The guided reading lesson plans protocol asks if each prompted
question is present (i.e., Y/N). If yes, then I made notes regarding how the participant
used what the guided reading lesson plans protocol was asking in their lesson plan. For
guided reading, the guided reading lesson plans protocol looks for evidence of guided
reading practices such as book introductions, new content, high-frequency, a focus on
comprehension, students being engaged in silent reading, discussions, word work, and
text-dependent activities.

If there was evidence of guided reading practices, I used follow-up questions in
the interview to prompt participants for descriptions on how they used them in the plan.
The accompanying interview protocol also includes prompts for the participant to narrate
evidence of ZPD and DDDM in the lesson plans. In this way, the lesson plan and
interview protocols affirmed data.

Basis for Development & Alignment. I developed the guided reading lesson

plan protocol to ensure content validity. I aligned the guided reading lesson plan protocol

Items 1–11 with the problem statement and the RQs of the study. The items used in the

guided reading lesson plans protocol aligned with the guided reading practices of Fountas

and Pinnell (2016). They directly look for evidence of Vygotsky's (1962) ZPD and

Leithwood's (2010) DDDM used throughout the lesson plan. The guided reading lesson

plans protocol allowed me to look for independent guided reading elements with clarity

and consistency while determining if participants used any practices associated with the

constructs of ZPD and DDDM. Table 1 details the alignment of the lesson plan protocol

with the framework, problem and RQs in this study.

Table 1

Alignment of Guided Reading Lesson Plan Items with Problem, Framework, and RQs

| | Areas of Alignment | | | | |
| | Frameworks | | RQ | | |
Item	ZPD	DDDM	1	2	Guided reading
1	*		*		*
2	*	*	*		*
3	*	*	*		*
4	*		*		*
5	*	*	*		*
6	*	*	*		*
7	*	*	*		*
8		*		*	
9	*		*		
10		*		*	
11	*		*		

I completed a simple pilot of the guided reading lesson plan protocol to verify the alignment and its appropriateness for the intended assessment.

Establishing Content Validity. After I created the guided reading lesson plan protocol determine teachers' use of ZPD and guided reading, an expert committee of three reading specialists and my doctoral committee reviewed the protocol and provided feedback on its alignment with ZPD, DDDM and my RQs.

An expert committee of three reading specialists reviewed the lesson plan protocol for validation. They examined the guided reading lesson plans protocol for independent elements, clarity, and consistency and reflected on the constructs of ZPD and DDDM currently used in reading. All three experts held master's degrees in elementary or early childhood education and were National Board-certified teachers with specialties in reading or Reading Recovery. Two experts also had administrative or supervision experience, and one held an education specialist and doctorate degree. The expert committee reviewed the lesson plan protocol for independent elements, clarity, and consistency, and provided a reflection on the current use of ZPD and DDDM in the field reading.

Members of my doctoral study committee also reviewed the lesson plan protocol to assure consistency within the research topics and for alignment with the conceptual frameworks of the study. Specifically, they looked for evidence that my protocol was appropriate for tracking evidence of ZPD and DDDM in the lesson plan. I completed one lesson plan pilot analysis and submitted it to my committee. They analyzed the actual lesson plan and my document review notes and then provided feedback on how I could

improve my analysis by better applying the guided reading lesson plan protocol. They determined that the guided reading lesson plan protocol met the requirements of my study's framework and RQ's and I moved forward with the remainder of my lesson plan analyses.

Application of Instrument. All participants shared 1-week of multilevel, guided reading lesson plans for my review. After I completed the guided reading lesson plans protocol on each participant's lesson plans, I added three personalized or clarifying questions to each participant's interview. I recorded these questions on each participant's individualized interview sheet. This data collection process allowed me to gain further insight into the participant's lesson planning process and how they incorporated ZPD and DDDM.

When I reviewed the guided reading lesson plans, I examined teachers' operational knowledge of DDDM and ZPD when planning instruction. I achieved this by reviewing the cyclical process of guided reading and teachers' use of formative assessment data, DDDM, to understand students' individual needs and maintain optimal learning environments for students, ZPD. Understanding teachers' operational knowledge of DDDM and ZPD when planning guided reading instruction allowed for fluid, data-driven, student-guided reading groups based on individual student needs.

Interview Protocol

After completing the lesson plan protocol, I completed a 1:1 interview with each participant. This data collection process allowed me to gain further insight into the participant's lesson planning process and their understanding and use of ZPD and DDDM

in their daily guided reading instruction

The interview protocol includes 12 questions based on the study's conceptual framework, DDDM, and ZPD; and three additional questions based on the lesson protocol review completed before the interview. All interview protocol questions had additional probing questions that could be used as needed. Table 2 includes the alignment of the interview content with the framework and RQs

Table 2

Alignment of Interview Protocol Items with Problem, Framework, and RQs

| | Areas of Alignment | | | | |
| | Frameworks | | RQ | | |
Item	ZPD	DDDM	1	2	Guided reading
1					*
2		*		*	
3		*		*	*
4	*	*		*	*
5	*	*		*	*
6	*	*		*	*
7		*		*	*
8		*	*		*
9	*		*		
10	*	*		*	*
11	*	*	*		*
12	*	*	*		*

Additionally, I aligned the guided reading lesson plans protocol with the study's problem statement, which states that first- and second grade classrooms are not consistently using relevant and timely data and ZPD to make decisions in when planning guided reading.

Description & Overview. The interview protocol began with an introducing of myself, including my experience, and reminding the participant that they had received, signed, and returned the informed consent via email. I had an additional section to re-check qualifications and informed consent a second time for quality and assurance. The introduction included a review of the purpose of the study and disclosure that the interview would be recorded. The last introductory task was to review the parameters for the interview. These included ensuring that the participant only spoke of their personal experience and not the experience of others, not generalizing situations, and not using specific names of students, parents, or teachers. I also included a reminder to have the participant ask any questions about these items before the interview.

The main portion of the interview consisted of 12 questions. These questions discussed the implementation of DDDM and ZPD in the guided reading classroom. Seven questions were about DDDM: defining it, explaining how it is used to inform instruction, and how it affects daily teaching and instructional planning. Additionally, one item is about what data are used to guide reading instruction. There were four items about ZPD—one item had three parts: defining it, methods to determine a student's ZPD, and procedures once ZPD is established. The additional items were about how ZPD knowledge informs instructional decisions. All questions had additional probing questions that included sharing examples and rationale.

The last part of the interview contained three personalized questions for the participant that stemmed from their guided reading lesson plans protocol. From these items, I may tailor a specific question to follow up or clarify on a finding in the lesson

plan analysis. If needed, these three questions had the same follow-up probing stems included in the previous question set.

Basis for Development & Alignment. I developed the interview protocol to determine teachers' use of ZPD and DDDM in guided reading. I did not use any historical or legal documents as a source of data. Interview protocols are essential in qualitative research because they contain questions used to explore a specific phenomenon (Rubin & Rubin, 2012). Interview protocols may be provided in advance to participants, institutional review boards (IRB), and participating sites as needed (Rubin & Rubin, 2012).

I developed the interview protocol to reflect current practices of the constructs of ZPD and DDDM that are in the field of reading. The interview protocol sought more profound evidence of ZPD and DDDM in the participant's understanding and use of ZPD and DDDM in their daily guided reading instruction.

Establishing Content Validity & Alignment. I developed the interview protocol to ensure content validly. I aligned the interview protocol Items 1-12 with the problem statement and the RQs of the study. The items used in the interview protocol directly aligned with this study's frameworks of Vygotsky's (1962) ZPD and Leithwood's (2010) DDDM. The interview protocol allowed me to look for aspects of guided reading elements through conversation to determine if participants used any of the practices associated with the constructs of ZPD and DDDM in their daily instructional planning.

I completed a pilot for the interview protocol. After I created the interview protocol, my doctoral committee reviewed the protocol and provided feedback on its

alignment with ZPD, DDDM and my RQs. I completed one interview with an educator using the interview protocol and submitted it to my committee who reviewed the interview recording, transcript, and protocol for alignment and provided additional feedback on using probing questions during the interview process. These questions were provided in the protocol but the committee stressed that I could use more than one, as written if necessary, during the interview. They deemed that the interview protocol met the requirements of my study's framework and RQ's and I moved forward with the remainder of my interviews. Applying these two instruments allowed me to gain further insight into the participant's lesson planning process and their understanding and use of ZPD and DDDM in their daily guided reading instruction.

Procedures for Recruitment, Participation, and Data Collection

This section explains the recruiting procedures and describes how participants provided informed consent. I describe the location, frequency, duration, and recording of data collection events for lesson plan reviews and interviews. I also explain how participants exited the study and my follow-up procedures.

Recruitment Process

Before I made initial contact, I requested approval from both Walden's Institutional Review Board and the district's research team. Teacher recruitment occurred after notification of the campus administrators that the study was happening on their campus. Three elementary schools are in the school district, but I only used two to collect data. I eliminated the elementary school where I work for data collection to address potential ethical concerns and conflicts of interest.

In the study, there were six teacher participants from each of the two schools 12 teachers. I recruited teachers by identifying first- and second-grade teachers in the target schools from the school's website. Teachers' direct school phone numbers were listed on their public-school websites. I recruited teachers via a phone call to their direct district school phone number, where I asked them to participate in the study. During this phone call, I introduced myself, explained the purpose of the research study and invited them to be a participant. I also explained I would send an email invitation and asked the address they preferred to receive it.

Informed Consent

The follow-up email provided a copy of the letter of informed consent, the dates of data collection for the study, the benefits of participation in the study, and the guided reading lesson plans protocol. I sent a follow-up email and obtained informed consent via email, and then I scheduled an initial Zoom chat so that I could explain all the emailed documents to participants and what was happening in the study. After the Zoom chat, teachers had 1 week to return the email invitation to participate in the study. Acceptance was an email with the statement: *I am willing to participate in the study*. Once participants agreed, a mutually agreed upon time and date were determined to collect lesson plan and interview data. Recruitment resulted in enough participants, so I did not need to use secondary methods of recruitment Teachers who consented to be a part of the study participated in providing 1-week of multilevel, guided reading lesson plans and a Zoom interview.

Data Collection

This section includes an overview of the location, frequency, duration, and recording of all data collection events for this study and the process for participants to exit the study. In this section, I discuss the gathering of lesson plan and interview data.

Lesson Plan Data. I collected lesson plans from each participant via email 1 week before the completion of the interview. I printed a copy and labeled all hard copies using the alphanumeric code assigned to each participant. I reviewed each lesson plan using the guided reading lesson plans protocol to look for deeper evidence of the participant's understanding and use of ZPD and DDDM in their daily guided reading instruction.

Interview Data. Using the interview protocol, I welcomed the participant, introduced myself, and thanked them for agreeing to participate in the study. I discussed the events for participation in the consent form they received and guaranteed their confidentiality. I obtained their consent to record the interview and asked them if they had any questions. I confirmed the receipt of their consent form with them before we began the interview. After the interview, I expressed my appreciation and thanks for their participation in the study. I assured them again that their responses were confidential. I reminded them that, if needed, I would follow up with them to complete member checking of the findings.

I gathered data for this study during semistructured interviews with the participants. I scheduled Zoom interviews with the participants within 1 week of the completion of the lesson plan document review. I used the Zoom application to record the

interview so that I could later transcribe the meeting discussion for data collection review. Participants completed the Zoom interview in one 60-minute session at maximum. I conducted interviews over a private conference line from my home office and in a private place for the teacher participant.

I used the interview protocol to guide the Zoom interviews and asked questions on how the teacher used DDDM and ZPD to inform guided reading instruction. Specific focus areas for the lesson plans included evidence that students were working with the teacher in a guided reading group, a book introduction, new content and high-frequency words, silent reading, comprehension, vocabulary, and writing activities. During the interview, I recorded important information and notes under each question. By recording the interviews and transcribing them, there was assurance that I would accurately record all details from the participant. By recording my notes and thoughts in the interview guide, I could separate bias and my thoughts from the transcript.

Recording & Tracking Data

Tracking and recording data for this study was essential. Since there were two ways of obtaining data in this study, I reviewed them separately based on how I tracked and recorded them. I traced the lesson plan and interview data using separate protocols. I developed these protocols vetted by reading professionals and my dissertation committee. I detailed each method of tracking and recording separately in the following section.

Lesson Plan Data. I tracked lesson plan data and recorded it using the lesson plan protocol. I collected all lesson plans via email from each participant and printed in hard copy form. I labeled all hard copies using the alphanumeric code assigned to each

participant. I reviewed each lesson plan using the guided reading lesson plans protocol to look for deeper evidence of the participant's understanding and use of ZPD and DDDM in their daily guided reading instruction.

Semistructured Interview Data. I tracked the interview data and recorded it using the guided reading lesson plans protocol. I scheduled the Zoom interviews with the participants for data collection. I used the interview protocol to guide the Zoom interviews. I used the Zoom application to record the interview so that I could later transcribe the meeting discussion for data collection review. I stored the data by alphanumeric codes used for participant identification to code participant interviews. I recorded the Zoom interviews through the Zoom application, downloaded into a folder on my desktop computer, and saved under a password-protected setting.

I tracked each interview for notation using the interview protocol. This allowed for a record of my notes in addition to me being able to transcribe the Zoom recording later than the actual conversation between myself and the participant regarding the interview protocol. Transcription and my notation of the same interview protocol allowed for intense data tracking and a deeper understanding of the participant's operational knowledge of DDDM and ZPD when planning instruction. I reviewed the cyclical process of guided reading and teachers' use of formative assessment data, DDDM, to understand students' individual needs and maintain optimal learning environments for students, ZPD. Understanding teachers' operational knowledge of DDDM and ZPD when planning guided reading instruction allowed for fluid, data-driven, student-guided reading groups based on individual student needs.

Participant Exit and Follow-Up Procedures

At the end of the interview, I asked participants if I could contact them via email or phone if I needed any additional information. I considered participants exited from the study at the time of data analysis completion. At this time, I did not need additional information from participants.

Data Analysis Plan

I followed this outlined analysis plan to analyze the interview data I gathered in this study, which included tradition, data types, and objectives. I presented the study as a qualitative case study. I completed an in-depth examination of how first- and second-grade teachers use instructional practices for guided reading and using data to drive instructional decisions within a bounded setting. Yazan (2015) stated that case studies allow for additions to an existing research base, which can assist in understanding the problem from the viewpoint of other stakeholders. I used a qualitative case study design to gather and synthesize data through lesson plan reviews and interviews of participants. Per Yazan, data collection in two forms allows a deeper understanding of them phenomenon, which—in this study—was how participants planned and implemented guided reading in their instruction.

The participants' lesson plan data addressed RQ1, which asked how first- and second-grade teachers plan and implement a guided reading lesson based on students' ZPD. I used the participant interview data to address RQ2, which asked how do first- and second-grade teachers use DDDM to determine the next steps in the guided reading lesson. Qualitative research requires the alignment and connectivity of data collection,

data analysis, and the conceptual framework of the research (Babbie, 2017). In this section, I explained how and when I analyzed data, including the connection of data to a specific RQ, types of coding procedures, type of analysis, and manner of treatment of discrepant cases.

Data Analysis Plan for Guided Reading Lesson Plans Protocol

When analyzing the lesson plan data, I plan to begin with a blank guided reading lesson plans protocol to review the scope of the study's framework and how it aligns with the lesson plans. Next, I reviewed each participant's set of lesson plans reviewed individually using the guided reading lesson plans protocol. I made notes according to the yes/no format on the protocol and added notes on the protocol based on what I observed in the lesson plans. After I completed the guided reading lesson plans protocol for each participant, I added three questions to the participants' interview protocol. These questions were for clarification regarding the lesson plans or to ask for additional probing information regarding the lesson plans. I labeled hard copies using the alphanumeric code assigned to each participant. During the lesson plan review process, I searched for evidence of the participant's understanding and use of ZPD and DDDM in their daily guided reading lesson plans.

Semistructured Interview Data Analysis Plan

When analyzing the interview data, I began with a blank interview protocol to review the scope of the study's framework and how it aligns with each interview. Next, I reviewed each participant's interview transcript individually using the interview protocol.

I will then compare the transcript notes to the notes taken during the interview. I then put each interview into a table format to look for participant similarities.

Coding Procedures & Processes

In this study I used an inductive approach to analyze the qualitative data. The inductive analysis allows me to interpret the general raw data into smaller themes regarding the studied phenomenon (Rubin & Rubin, 2012). An inductive approach is best for the study because it searches for patterns to develop explanations of those patterns (Research Methodology, 2019).

Type of and Procedure for Coding. Various coding strategies to reduce data to a manageable amount so that I could answer the RQs. The a priori codes were based on the constructs of the conceptual frameworks specific to DDDM and ZPD. A priori codes provide pre-determined codes based on essential terms related to the key constructs of the study (Ravitch & Carl, 2016). Open coding followed the a priori codes. Ravitch and Carl (2016) stated that using two rounds of open coding, one to help determine what stands out in the data and a second round to focus on aspects of the data centered around the RQs, provides deeper analysis of the data. Axial coding was essential to the research study because it allowed me to determine patterns and clusters in the data to determine overarching categories or common themes (Ravitch & Carl, 2016).

Type of Coding Analysis. The study's coding analysis centered on synthesizing data to determine if I had explored the study's purpose and problem. When analyzing the codes for this study, I used an inductive approach. The purpose was to look for patterns on a large scale; therefore, I applied a priori coding to both data sets. I generated a priori

codes from the framework of the study and help to relate the data to the problem and purpose of the study (Fischer, et al., 2023). A priori codes for the study included: *independent level, instructional level, ZPD, guided reading, running records, anecdotal notes, conversations,* and *DDDM*. After a priori coding, I shifted to open coding.

In open coding, the synthesis of data focuses on larger sections of information grouped by categories (Ningi, 2022). I completed the open coding after the a priori codes to search for repeated words, phrases, and ideas within data transcripts to label repetitions and give meaning to the label. After I finished open coding, I completed axial coding.

Axial coding is used it to search for relationships among the open codes and examine their relationships causally and interactionally (Mohajan, et al., 2022). The axial coding format allowed me to narrow the data from a broad information set to one or two overall themes. Axial coding was appropriate for the problem and purpose of the study because I was able to take a general topic and find a common theme to add to the existing research surrounding DDDM and ZPD in the guided reading setting of first- and second grade classrooms.

Guided Reading Lesson Plans Protocol and Interview Data Coding. When coding the guided reading lesson plan data and interview data, I entered all information into spreadsheets in Microsoft Excel. There was one spreadsheet for every a priori code. The spreadsheets had three columns: label, participant, and lesson plan excerpt/interview excerpt. I placed all information from the lesson plans or interview onto the appropriate a priori code spreadsheet that corresponded with the data. I completed this for all 12 participants. Next, I went through each a priori spreadsheet and highlighted common

information from participants. I began looking for repeated words between participants and noting similarities. I created a new spreadsheet that combined all information from the 12 individual spreadsheets into one common data spreadsheet. This helped when analyzing common categories during the open coding process. I looked for categories general to all participants' guided reading lesson plans and interviews during this process. I completed the process of open coding three times to continuously narrow my focus and look for common themes in the lesson plans. Finally, I arrived at the overall theme for guided reading lesson plan and interviews coding through axial coding.

Software/Data Management

I used the Zoom application to record participant interviews over a 6-week period. I used a transcription program called Sonix to transcribe my audio recordings to Microsoft word files. Sonix was a password encrypted transcription program that I used for a duration of 1 week to transcribe all Zoom recordings. I used Microsoft Word to manage all the transcriptions of Zoom recordings. I used this program for 3-4 months. I used Microsoft Excel used for the creation of coding charts to complete the coding and analysis of data process. I used this program for almost 2 years. All information from these software programs was saved to my desktop computer and it was password protected.

Discrepant Cases

Discrepant cases are those data that are outliers of the study. Ravitch and Carl (2016) stated that while the findings from discrepant cases may challenge the study's findings, they are essential to the overall research. Discrepant cases were determined by

searching for non-confirming data that did not support the theme. Once I identified a potentially discrepant case and analyzed it to determine how it differed from the themes. I checked with the participants to clarify and report information in the final document. In this way, potentially discrepant data were closely examined and the findings confirmed. There were no truly discrepant cases in this study.

Trustworthiness

In the study, I reported credibility, transferability, dependability, and confirmability to ensure trustworthiness (see Ravitch & Carl, 2016). I combined these elements to establish a valid and reliable plan for this study.

Credibility

Credibility provides truth to the findings through research establishment in several ways (Ravitch & Carl, 2016). Qualitative researchers attempt to establish credibility through triangulation, member checking, presenting thick descriptions, discussing negative cases, using peer debriefs, and having an external auditor (Babbie, 2017; Ravitch & Carl, 2016). For this study, I maintained trustworthiness by presenting thick descriptions and discussing negative cases that applied to this study. I used negative cases to strengthen the data found for this research. I achieved this objective by using differing viewpoints from negative cases and explaining their findings to strengthen the viewpoint of this study (Babbie, 2017).

Transferability

This small qualitative study has limited transferability. To maximize its transferability, I used detailed descriptions of the data, including the context, situation,

sample, and variation of participant selection (Babbie, 2017; Ravitch & Carl, 2016). I used thick descriptions in the wording of the study's procedures and clearly described the context so that the reader can decide if the findings are transferrable to similar contexts. To support the findings in my description, I discussed the context surrounding the data collection explicitly. I connected the participant and the social and cultural contexts surrounding them during data collection using journaling and documentation. Through this process, I accounted for the environment in which I collected the data and the participants' attitudes during data collection. I used these descriptions to alleviate any bias that was present through direct documentation.

This study is not transferable to other settings such as other larger districts, cities, or states. Replication of this study could occur at the beginning of the school year, or the middle of the school year to determine if the study yields the same results.

Dependability

Dependability refers to the stability of the data in the study (Babbie, 2017; Ravitch & Carl, 2016). Qualitative researchers attempt to establish dependability using alignment with the study's RQs (Ravitch & Carl, 2016). I included the use of data alignment by comparing two types of data: lesson plan and interview data. I established alignment by corroborating the findings of one data set with another. I analyzed the lesson plan data separately from the interview data and then verified the lesson plan data against the interview data.

Confirmability

I established confirmability through reflexivity. Reflexivity is the process of critical self-reflection of my thinking process during data collection and analysis. I used a reflexive journal to record my thoughts, decisions, and rationale for my findings as I progressed through the research process (Lincoln & Guba, 1985). The reflexive process allowed me to question my bias and establish the study's credibility.

Ethical Procedures

Ethical procedures are the core of any research study (Babbie, 2017). This section includes an overview of treatment of human participants, IRB accountability, and treatment of data. I additionally address all other ethical concerns.

Treatment/Protection of Human Participants

In the study, I considered ethics, especially with careful attention to the treatment of human participants. All participants signed a consent form for participation in this study before submitting lesson plans. I did not pay participants or provide them with incentives for participation in this study. All participation was voluntary, and participants could choose to opt out at any time without consequences. I had no personal relationships or power positions over the participants in this study. I identified all data using an alphanumeric code, such as S1T1G1, which ensured participants' confidentiality. I used an alphanumeric code in the qualitative report and dissemination of the findings. My committee had access to the data. I will destroy the data 5 years beyond the completion of the study.

Treatment of Data

I kept all data from this study secure in a locked, fire-proof file cabinet in my home office for 5 years beyond the completion of the study and destroyed it after that date. I will shred all paper data from copies made of lesson plans or handwritten notes and files. I will erase all digital data, including recorded Zoom sessions, digital notes, and Microsoft Excel files, from the stored portable hard drives and computer hard drives after 5 years have passed since the completion of the study. Consideration of these aspects provided a high ethical standard for a qualitative study.

Other Ethical Issues

Other ethical issues included studying within the school district where I work. There are three elementary schools in the rural school district, and I excluded the school where I am employed. My employment does not require me to interact with faculty at the other two elementary schools in the district. As data were collected during and after the COVID-19 pandemic, I chose to interview participants virtually rather than in person. Doing so provided opportunity to talk with participants while ethically maintaining safety-protocols.

Summary

In this chapter, I provided a discussion of the research methods that included the study's problem, purpose, RQs, and framework. The research methodology additionally included details on the participants, recruitment, data collection, and data analysis. In Chapter 4, I present a review of the final data collection and data analysis processes, results, and evidence of trustworthiness.

Chapter 4: Results

The purpose of this study was to explore how first- and second-grade teachers used DDDM and ZPD to inform guided reading instruction. I used a qualitative case study to research the problem in this study. The RQs in the study addressed how first- and second-grade teachers planned and implemented a guided reading lesson based on children's ZPD and how first- and second-grade teachers use DDDM to determine the next steps in the guided reading lesson. This chapter is an overview of the study's results. In this chapter, I will discuss the setting of the study, methods of data collection analysis, overall results of the study, evidence of trustworthiness, and a summary of the chapter, including tying the results together.

Setting

This study occurred in one rural school district in the Southeastern United States. The rural school district is the smallest school district in its county. Due to the small-town populations, the schools are not located close together and often separated by 20 miles or more. The school populations in the district range from 275-425 students. Teachers in this area grow up in this school district, go to school in this school district, and then return here to work after college. There are a small percentage of teachers in the school district from outside of the county. The study included participants who were first- and second-grade teachers, representative of only some rural first- and second-grade teachers. By eliminating the school where I am employed, I gathered data from participants at two of the three elementary schools within the district.

Conditions and Changes

I collected data for this study in the aftermath of the COVID-19 pandemic. The pandemic created new safety protocols but also new ways of collaborating with other people. Although I followed my planned data collection plan, I met with my 12 participants virtually to provide safety assurances. Otherwise, there were no changes or events that adversely affected the data collection or the interpretation of the study's results.

Demographics and Characteristics

In the sample for this study, I had 12 female participants: six teacher participants from each school. I had at least three teachers from each grade level: first- and second-grade. The viewpoints from teachers in different grade levels provided an opportunity to view guided reading instruction and the use of DDM and ZPD through their respective lenses. Table 3 includes the number of participants by school and grade level.

Table 3

Numbers of Participants Based Upon School & Grade Level

	Grade Level n		Total
School	1	2	
A	4	2	6
B	2	4	6
Total	6	6	12

The study required teachers to submit 1-week of multilevel, guided reading lesson plans and complete one semistructured Zoom interview. All 12 teachers completed each aspect of the study.

Data Collection

I collected data from 12 participants from two schools. I collected data via a lesson plan and an interview protocol. I used the guided reading lesson plans protocol to glean data from participants' documents and to answer each RQ. I used the interview protocol to determine how teachers planned and implemented guided reading lessons based on children's ZPD and how teachers used DDDM to determine the next steps in the following guided reading lesson. I used the data collection instruments to answer the RQ and to explore the phenomenon of guided reading based on the work of Vygotsky's (1962) ZPD model and Leithwood's (2019) DDDM model.

Lesson Plan Data Collection

For collecting lesson plans, I looked up public email addresses of teachers in first and second grades in the rural school district associated with this study. I emailed potential participants and asked if they wished to participate in the study and attached the parameters for participation and the consent form. If they returned the consent-to-participate email, I replied requesting 1-week of multilevel, guided reading lesson plans. Teachers had 1 week from the time of the email request date to submit their lesson plans for the study. Eight teachers sent them right away. Three teachers took 9-15 days to respond to the email. One teacher had a medical emergency but still requested to participate, leading to a wait of 3 weeks for her information. I considered the lesson plans

accepted when I sent a receipt email to the participant acknowledging their receipt and

acceptance. I reviewed the lesson plans according to the guided reading lesson plans

protocol and added probing questions for the interview.

Recording of Lesson Plan Data

I used a separate guided reading lesson plans protocol form for each participant to

record the lesson plan data. I took notes according to the format of the guided reading

lesson plans protocol based on what I observed in the lesson plans. After I completed the

guided reading lesson plans protocol for each participant, I created three questions for

each participant's interview protocol. Most participant questions were for additional

probing information regarding their use of DDDM and ZPD in guided reading based on

information or lack of information in the lesson plans. I labeled the lesson plans' physical

and digital copies using the alphanumeric code assigned to each participant. I stored

physical copies in a locked cabinet in my home office. I stored the digital copies on a

password-protected computer.

Interview Data Collection

I scheduled the Zoom interview with the participants and conducted it within 1

week of completing the lesson plan document review. I used the interview protocol to

guide the Zoom interviews. I used the Zoom application to record the interview so that I

could later transcribe the meeting discussion for data collection review. I used

alphanumeric codes stored in the data for participant identification. Participants

completed one 60-minute Zoom interview for the study. I conducted interviews over a

private conference line from my home office and in a private place for the teacher

participant. I worked around their schedules so that I could be in my home office for the interview times that they requested. I used the Zoom application to record the interviews and later transcribe them. I stored all interview data by alphanumeric codes used for participant identification and used them to code participant interviews. After the interview, I thanked the participant for being part of the study. For this study, I was able to conduct 12 individual interviews.

The interviews in this study occurred during June, July, and August of 2021. In the local region, COVID-19 protocols for social distancing were in effect. During this time, some of the participants were just finishing the school year and working summer school. Some participants had to conduct their interviews after work in the evening, while some had the flexibility of a summer schedule because they did not work summer school. The participants in the study all worked in the same rural school district so the participants all discussed many of the same expectations for guided reading and their lessons plans often looked the same due to common planning. However, during their interviews they would often discuss variations from the district timelines, variations in training, differences in options that changes how they managed their guided reading groups, and other factors that led to their personal classroom beliefs on guided reading.

Variations or Unusual Circumstances for all Data Collection

For this study, there were no variations in the data collection from the plan presented in Chapter 3. Participants completed the data collection portion as the study as I originally designed. Regarding unusual circumstances encountered in data collection, one participant had a medical emergency and needed to postpone her interview for

several weeks due to hospitalization. This emergency delayed her interview, but she still wanted to participate. I waited until she passed her hospitalization and recovery, and then I completed her interview.

<p align="center">**Data Analysis**</p>

I used an inductive analysis of the data in this study. A priori codes were set up, and I added additional codes through open coding. I used axial coding to relate the codes to one another. Following this ordered process allowed me to understand the data findings clearly and discover the emerging themes.

Preparation of Data for Analysis

To prepare the data for analysis, I organized both the physical lesson plan data sets and transcribed the digital audio recordings from individual interviews. I labeled each participant's data sets with codes to protect their identities. These steps were necessary so that the data were aligned and compared for accurate analysis.

Lesson Plan Data

I completed several steps in preparing the physical lesson plan data for coding. First, I deidentified participants by adding alphanumeric coding. This step was necessary to protect the identity of those who chose to participate in this study. The next step was to read over the lesson plans and organize them by participant and day. Since each participant submitted 1 week of multilevel guided reading lesson plans, many guided reading group plans were submitted per teacher. I organized the plans by day to provide a chronological order to the data. Next, I removed any repeating and unnecessary information. An example would be if a participant had PE during guided reading and

noted that in her plan, I removed that reference as it was unrelated to the study. After that, I read over the lesson plans three times: first as an accurate read; second, to make notes and highlight important parts related to the a priori codes; and then third, using the guided reading lesson plans protocol.

Interview Data

I completed several steps to prepare the digital interview data for coding. I deidentified the participants by adding alphanumeric coding to their Zoom file, ensuring that the code was the same as keyed on their lesson plan data. This step occurred on the day of the interview. The next step was to transcribe the Zoom interviews into Word documents. I also labeled these with the participant's alphanumeric code. I printed a physical copy along with a digital copy stored on my password-protected computer.

Next, I read over the interview transcript and organized the information into the folders for each participant. I listened to the audio recording while correcting the transcripts for accuracy. I removed obvious transcription errors like "vis" for "this." This step was necessary to ensure the transcripts made sense during data analysis. Next, I read the transcripts and removed any repeating and unnecessary information such as "um." I then read over the transcripts two more times: once as an accurate read, then again to verify alignment with the interview protocol. Finally, I read the data to make notes and highlight important parts prior to coding.

A Priori Coding

I generated a priori codes from the framework of the study to relate the data to the problem and purpose of the study (Fischer, et al., 2023). The items used for a priori codes

directly aligned with this study's frameworks of Vygotsky's (1962) ZPD and

Leithwood's (2010) DDDM. These a priori codes allowed me to look for aspects of

guided reading elements in the participant lesson plans as well as through the interview

conversations to determine if participants used any of the practices associated with the

constructs of ZPD and DDDM in guided reading or their daily instructional planning.

I began the coding process using a priori coding based on this study's framework

and the following terms: *independent level*, *instructional level*, *ZPD*, *guided reading*,

running records, *anecdotal notes*, *conversations*, and *DDDM*. Table 4contains examples

of each code, participant, and excerpts from the two data sources. I omitted the a priori

code *independent level* due to no corresponding data.

Table 4

Participant Interview Excerpts for A Priori Codes from Framework by Data Source

A priori code	Source	Participant	Excerpt
Instructional level	I	S1G2T4	I want them to be able to use the strategies that I give them to help decode. If they can work towards that, then that is what I consider their instructional level, which is why if they cannot use the strategy, I chose for them then that text is too hard.
ZPD	I	S1G1T1	The place where a kid has just enough challenge that they do not get frustrated
			This is how the teacher marks guided reading groups in her lesson plan
Guided reading	LP	S2G1T2	Strategy Focus: (Individual/Group 1; F&P) Teaching Points: Day 2
Running records	I	S1G1T4	I will use just daily running records from my guided reading group, just informal daily ones that I might take just to list a quick listen of a book.
Anecdotal notes	I	S2G1T1	I use my anecdotal notes from my whole group instruction, plus the notes I have from guided reading lessons to decide what comprehension point to focus on next.
			Discussion prompts are noted in the lesson plan and show topics for conversations in guided reading groups
Conversations	LP	S1G2T1	Discussion Prompts: (within, about, beyond): Day 2
			Within: Retell the story (Beginning, Middle, End)
			About: How does the author show that Rabbit is fast asleep?
			Beyond: What does the illustration show you about how Rabbit is feeling?
			Within: How did the characters solve the problem?
DDDM	I	S2G2T1	I take notes and then I will look at that at the end of the guided reading lesson to plan for the next day.

Note. LP = Lesson Plan; I = Interviews

Open Coding

Open coding was the second level of coding used to organize the data (Ravitch & Carl, 2016). After a priori coding, I applied open coding to uncoded data. I used open coding to organize the information collected from the lesson plan reviews or the interview transcripts into categories. I also returned to the raw data from each data source to ensure I had not missed any repetitions. I searched these data for similarities and

labeled groups of words with a term that gave meaning to word group. I considered and labeled the data according to categories.

I used the open coding process to refine the data of this research study by finding the related concepts, themes, events, and examples of the study's problem (Rubin & Rubin, 2012). Open coding resulted in a total of 26 codes. Table 5 contains examples of open codes, participants, and excerpts from the two data sources: interviews and lesson plans.

Table 5

Open Codes and Illustrative Participant Interview and Lesson Plan Excerpts

Open codes	Source	Participant	Excerpt
Running record analysis drives daily instruction	I	S1G1T1	Running records or anecdotal notes that you are taking while you are teaching the group to inform and change your instruction for the next day or in the moment
ZPD	I	S2G1T2	That is where that sweet spot that the students and their instructional level and it is, it is where they can do it on their own
Individualized instruction	LP	S1G2T3	*Excerpt from LP to show individualized grouping* Reading (individual/ Group 4) (F&P): Day 1 ~~Zayden~~ – accuracy, cross-checking ~~Rayne~~ – accuracy, cross-checking

Note. LP = Lesson Plan; I = Interviews

Axial Coding

I assigned and used axial codes based partially on the study's problem statement and RQs. Axial coding provided a way to evaluate how the different concepts and ideas functioned concerning one another (Ravitch & Carl, 2016). During the axial coding stage, I searched the open codes and corresponding excerpts from interviews and lesson plans to identify the relationships among the open codes. I grouped similar open codes and assigned a code to each category. There were 26 open codes that I categorized after three rounds of open coding to yield four axial codes. Table 6 includes the revised axial codes and alignment to the open codes.

Table 6

Number of Open Codes That Informed Each Axial Code by Construct and Research Question

No. of open codes	Axial code	ZPD	DDDM
11	Data that informs planning		RQ2
11	Design elements for ZPD-based learning activities	RQ1	
10	Scaffolding strategies	RQ1	
10	Ongoing assessment of teaching and learning progress	RQ1	RQ2

Data That Informs Planning

The axial code *data that informs planning* was informed by 11 open codes. The main idea of this code was that data were used to drive the teachers' planning decisions for student guided reading lessons. I grouped all open codes relative to the content or

lesson objective into this axial code as well as all others about data that informed

planning decisions. These data type codes included observations, notes from formative

and summative guided and independent reading conferences, anecdotal notes, and ZPD

and running records.

Design Elements for ZPD-Based Learning Activities

The axial code *design elements for ZPD-based learning activities* was informed

by 11 open codes. The main idea of this axial code was that there are various design

elements that inform planning and creating ZPD-based learning activities. I grouped all

open codes relative to the content or lesson objective into this axial code as well as all

others about types of learning activities or strategies used for differentiation. These codes

included *leveled vocabulary*, *word work*, or *high-frequency words*; codes about *running*

record analysis; and codes for other data types such as *anecdotal notes*, *ZPD*, and *guided*

and independent reading conferences that informed planning or decision-making. The

design elements embodied in this axial code evidenced participant intentionality in

creating guided reading lessons to improve teaching and learning.

Scaffolding Strategies

The axial code *scaffolding strategies* was informed by 10 open codes. The main

idea in this axial code was that teachers used various scaffolding strategies to guide ZPD-

informed reading lessons. The open codes that informed this axial code were about

breaking the objective or content into steps; choosing sensory, interactive, or graphic

scaffolds for content; or applying strategies such as show/tell, pause/teach/pause/review,

and using different types of questioning. All scaffolding strategies indicated options when

differentiating instruction to reach and stretch student ZPD.

Ongoing Assessment of Teaching & Learning Progress

The axial code *ongoing assessment of teaching and learning (T&L) progress* was informed by 10 open codes. The code represented an array of data types that participants indicated were used to guide instruction. The open codes included both formative and summative assessments as well as T&L activities that were both individual and group. The axial code indicated formative and summative data points with T&L activities that used to drive instruction for guided reading lessons.

Summary

The 26 open codes were assimilated into larger categories called axial codes and assigned a title based upon the meaning generated from the data. I then used the four resulting axial codes to create thematic statements that addressed the RQs in this study. Table 7 includes the number of open codes that informed each of the four axial codes, including illustrative examples from the data sources.

Table 7

Number of Open Codes That Informed Each Axial Code with Illustrative Participant

Excerpt

No. of open codes	Axial codes	Source	Participant	Excerpt
11	Data that informs planning	I	S1G1T1	Using what they do one day to plan for the next day, it makes sure you are giving them more of what they need because you are really (a) watching how they are reading (b) what they are successful at and (c) how you can use that to build upon what they need to work on.
11	Design elements for ZPD-based learning activities	I	S2G1T1	I use my anecdotal notes from my whole group instruction, plus the anecdotal notes I have from guided reading lessons to decide what comprehension point to focus on next.
10	Scaffolding strategies	LP	S2G1T3	*Excerpt from LP to show scaffolding of guided reading groups and the tasks involved within each of the 4 reading groups* Guided Reading Group 1: Focus: Sight words fluency, decoding unknown words, talking about BME of text Group 2: Focus: Sight words fluency, decoding unknown words, talking about problem/solution Group 3: Focus: decoding unknown words, talking about problem/solution Group 4: Focus: Comprehension
10	Ongoing assessment of teaching and learning progress	LP	S1G1T2	*Excerpt from LP to show individualized teaching and assessment of student discussions* Read/Discuss/Teach 1. Summarize the important events from the text in the order that they happened. 2. What was the problem of the story? How did it get solved? 3. Look at the dialogue in the text. What does the dialogue tell you about how the characters are feeling or thinking?

Note. LP = Lesson Plan; I = Interviews

Alignment to RQs

I further developed the axial codes into categories based on their connection to the RQs directly aligned with the study's conceptual framework. While some axial codes aligned directly to RQ1, others were more aligned to RQ2; one axial code had a connection to both RQ1 and RQ2. Therefore, three axial codes informed RQ1 and two axial codes informed RQ 2. Table 8 includes the alignment of the axial codes to the RQs.

Table 8

Number of Open Codes & Alignment of Axial Codes to RQs

	Open Codes *n*	
Axial codes	RQ1 → ZPD	RQ2 →DDDM
1 Data that informs planning		11
2 Design elements for ZPD-based learning activities	11	
3 Scaffolding strategies	10	
4 Ongoing assessment of teaching and learning progress	9	10

When exploring how first- and second-grade teachers planned and implemented a guided reading lesson based on students' ZPD, I found that most first- and second-grade teachers used DDDM to determine the next steps in the guided reading lesson. Therefore, if teachers were using DDDM to determine the next steps in the guided reading lesson, they were also using ZPD when planning and implementing guided reading lessons. The alignment of the open and axial codes with the RQs informed the development of the theme statements that emerged from the data analysis. Appendix C includes a visual

summary of the open codes that informed the axial codes and their alignment to the constructs in each RQ.

Themes

To move from categories to themes, I analyzed corresponding categories as well as participant excerpts to identify relationships and connections among the codes. Further, I narrowed those categories based on their connection to the RQs directly aligned with the study's conceptual framework. As I narrated the "story" of my participants in my drafts and reflective journals, two clear themes emerged from my search for patterns across categories:

- Theme 1: Teachers indicated that ZPD-informed guided reading lessons require intentionally selected design elements and scaffolding strategies with continuous assessment of teaching and learning progress.

- Theme 2: Teachers indicated that next steps in data-driven guided reading lessons are informed by student ZPD, running records, and anecdotal data from reading conferences and observations.

It is critical to understand the importance of these two main themes as they apply to the RQs of how first- and second-grade teachers use ZPD to plan and implement a guided reading lesson and determine the next steps with DDDM.

Theme 1: Individualized Learning within Students' ZPD

All 12 teachers provided responses that indicated that they individualized instruction for students based on their ZPD. Three axial codes—design elements for ZPD-based learning activities, scaffolding strategies, and ongoing assessment of teaching

and learning progress—were used to support Theme 1. These axial codes emerged from 20 open codes, that defined design elements for ZPD-based learning activities, scaffolding strategies, and ongoing assessment of teaching and learning progress.

Design Elements for ZPD-Based Learning Activities. The axial code design elements for ZPD-based learning activities emerged from participant interviews, lesson plan reviews, and coding analysis. This process revealed that teachers were intentional in the inclusion of design elements for ZPD-based learning activities which included the use of students' reading levels to individualize guided reading components. These components included leveled vocabulary, leveled word work, the use of ZPD within their planning to include differentiated content that was crafted for guided reading, and the use of guided and independent reading conferences to inform instruction.

As participants discussed the process that unfolded during and after guided reading groups, they discussed the questioning that occurred of their students during guided reading group and how this helped them take notes and inform their upcoming instruction. This revealed the use of scaffolded questioning that included within, beyond, and about questioning based on students' needs. Participants also discussed using running records on a formative basis to track student progress, move levels for students within the group, or change student groups based on individualized needs. As I questioned participants about planning, they further discussed the need to scaffold instruction within groups to meet individual needs of students. Participants discussed strategy-based teaching to meet student needs. Discussions surrounding strategies, monitoring student progress, and observing student behaviors and learning were all evident to ensure that

teachers knew what was needed to help students be successful in guided reading. These processes and steps presented by teachers, allowed me to develop the open codes and group them together to determine the axial code of individualized instruction based on student's individual needs that related to Theme 1.

Scaffolding Strategies. The axial code scaffolding strategies emerged from participant interviews and lesson plan analysis. As I delved into participants interviews and compared their transcripts with their lesson plans, I could see that teachers used a variety of scaffolding tools when planning and implementing guided reading. It was also evident that some teachers integrated methods to assess and pivot as needed through the week within their plans. This practice was most evident with teachers who had a Reading Recovery or ELPD background which was evidenced through their planning and assessment types listed within their lesson plans.

As participants discussed the process of scaffolding in their interviews and subsequently "showed' this process in their lesson plans, I was able to see that there was evidence of assessments to drive instruction. It was also evident that there was clear planning to scaffold using the show and tell method within guided reading as well as the Pause/Teach/Pause/Review method. Teachers also discussed their use of questioning for understanding which requiring students to think on grade level. This was evidenced in their lesson plans by having varying levels that scaffolded vocabulary, assessments, and materials, yet required students to think at the grade level standard. One participant S1G2T2 said,

I usually look at their level, what they should be doing at that level, and where

they should be regarding the F and P. We have a learning continuum that breaks

that down that we can use. So, I look at where they are supposed to be, but I look

at what they, you know if they are below or above that ZPD or where they should

be for reading.

This quote shows that using questioning within the continuum of Fountas and Pinnell to

drive instruction is an important step to determine how to individualize instruction. It also

provides a window into how ZPD plays a role in questioning.

Teachers planned for and discussed the use of running records as a means of

formative assessments. All participants discussed the need-to-know accuracy, fluency,

comprehension yet only a portion of participants, those with Reading Recovery or ELPD

training discussed the need for deeper analysis of those running records at the meaning,

structure, visual level. Participant S2G1T1 stated, "I look the Fountas and Pinnell

benchmark assessment and I analyze them using the using the sources of information,

MSV, meaning, structure, and visual information." Additionally, teachers collected data

through informal means such as observations, monitoring behaviors and discussion

within the guided reading groups, as well as analyzing anecdotal notes. Through the data

collection, it was apparent that teachers analyzed data from guided reading components

such as running records using meaning, structure, and visual, as well as questioning

patterns from Fountas and Pinnell using within, about, and beyond questioning.

Ongoing Assessment of T&L. The axial code ongoing assessment of teaching

and learning emerged from participant interviews and lesson plan analysis. The process

of guided reading is a cyclic and continuous process that requires teachers to monitor students formatively to determine their individual needs. The cyclic nature of guided reading is both for teaching and planning as well as student learning. Participant S2G2T3 discussed how scaffolding was essential in their students' instruction based on their knowledge of their ZPD. The participant stated, "using scaffolding to meet their individual needs based on the data from the informal, formal assessments and go-to notes and running records." Throughout the guided reading process discussed by participants, scaffolding occurred through the various processes of anecdotal note taking, conferencing, use of discussion points, leveled word work, vocabulary, and texts, as well as through formal assessments.

Scaffolding was a natural foundation through which guided reading was built. Participant S1G2T4 stated that using data helped give her an "idea of the growth they are making or changes that need to be made in their instruction." Additionally, the participant stated, "Something as simple as eating lunch and visiting with the student could provide this opportunity." The educator extended her explanation of DDDM into ZPD by explaining that individualizing instruction "really helps you find the sweet spot" for a student's particular level, and then "you can kind of tailor" the instruction to your student. They indicated that individualized learning must occur in the guided reading instruction and teacher planning for these students to experience success in reading.

Summary. All the participating educators stated that they used the guided reading model for instruction and presented 1-week of multilevel, guided lesson plans that showed how they individualize planning for each student. When asked to define DDDM

and examples from their experience, most participants wanted me to know about planning for their guided reading. They discussed their extensive use of Fountas and Pinnell to drive their guided reading group and how they looked for student fluency and accuracy to make determinations for student groupings. Policastro (2017) stated that students who spend more time in guided reading groups with their teacher and experience individualized instruction have greater success in reading. Individualized learning allows teachers to pinpoint skills and dial into students to target skills that lead to stronger reading achievement.

Theme 2: Analysis of Data to Drive Guided Reading Instruction

Two axial codes—data that informs planning and ongoing assessment of teaching and learning progress —were used to support Theme 2. These axial codes emerged from 15 open codes that discussed the importance of using data to drive guided reading instruction. The codes focused on how assessments drive instruction using both formative and summative assessments. These assessments included running records, guided and independent reading conferences, strategy groups, and teacher questioning.

Data That Informs Planning. The axial code data that informs planning emerged from participant interviews and lesson plan analysis. Teachers discussed the use of formative and summative assessments of ZPD within students' reading levels. They discussed the importance of using assessments such as formative running records, anecdotal notes, and observations to drive instruction. Teachers specifically discussed the importance of running records and hoe they are key to informing instructional decisions through the analysis of accuracy, fluency, and comprehension. They also discussed the

importance of deeper analysis by looking at errors through the lens of MSV. Participant S1G2T2 stated, "We work on running records, look at accuracy, fluency, self-correction rate. We look for errors with structure and meaning and visual and within those subsets of errors we will then classify those within the group to guide instruction." This evidence shows that the analysis of running records allowed for individualization of student learning.

Ongoing Assessment of T&L Progess. The axial code ongoing assessment of teaching and learning progress emerged from participant interviews and lesson plan analysis. Teachers discussed the use of guided and independent reading conferences as well as using anecdotal notes from observations and monitoring to inform how they proceed with planning for future guided reading lessons. Teachers discussed how they used running records frequently to determine how students were performing, glean quick information on a student, and make continuous ongoing adjustments to instruction based on those running records. Participants discussed the difference in an "on the go" running record versus a more formal running record where they would analyze the errors. "On the go" running records are quick and looked at for simple accuracy, fluency, and comprehension. Formal running records were analyzed error by error for deeper understanding through MSV. Participant S1G1T1 said, " …going back to the data that you take for conferencing notes, informal formal assessments, and just making sure that you know each student strengths and weaknesses and a certain skill or area."

Teachers often discussed using the 3-cueing system (MSV) for error analysis. Interviews showed that most teachers knew the importance and timeliness of data

analysis to drive the change in their guided reading groups. There were variations in how often teachers used the data to drive their guided reading group changes. The rate of using data analysis to drive instruction ranged from daily to monthly to every 9-weeks when the teacher gave the next Fountas and Pinnell assessment for their district timeline. Data collection showed that teachers were comfortable with the Fountas and Pinnell System for guided reading and the data analysis features of MSV. One participant, S1G2T2, explained the data analysis cycle and guided reading groups. This portrayal of the data cycle shows why data analysis is essential to driving instruction and why it is important for teachers to understand the process when planning their guided reading instruction,

> We will work on running records and look at accuracy, fluency, and self-correction rate. We look for errors with structure, meaning, and visual, and within those subsets of errors, we will then classify those within the group. We are looking at what specific things that student needs to work on."

Teachers see the need for data analysis; they discussed the need and processes to complete the process.

Summary. Teachers indicated that DDDM, coupled with analysis and applied to guided reading, is critical to helping students make significant gains in reading (Leu & Maykel, 2016). Teachers discussed the challenge of having time to analyze running records. often citing number of students, other duties, and the amount of time it takes to MSV just one running record. These challenges indicate a complex set of issues in guided reading. It shows that teachers see the need but for a host of reasons, are choosing not to

delve deeper into the analysis of running records. They are taking the surface information and using it to make quick educational decisions for their students.

Discrepant Cases

According to Ravitch and Carl (2016), discrepant cases are not unusual in research. However, there were no true outliers or discrepant cases in the data for this study. Some interview-preparation required that I add pre-planned probing questions to get teachers to elicit discussion on their use of DDDM and ZPD within guided reading. Through probing questions, there were three second-grade teachers who were not Reading Recovery or Early Literacy Professionally Development (ELPD) trained did not discuss an explicit way to use data to drive instruction on a daily or weekly basis in their guided reading instruction. These participants discussed using only district guidelines of using the Fountas and Pinnell benchmark to determine student levels or changing guided reading groups each nine weeks only.

When discussing ZPD with participants there were 4 that had not heard the term *zone of proximal* development but they knew from probing questions that it meant to find the area where students were learning at their personal and individualized pace that was not too hard and not too easy.

While these cases were not truly discrepant findings or cases, they did show that not all teachers are using data, using data the same way, or using data to drive their instruction. Additionally, these cases brought to light that teachers understand differentiation of instruction and independent levels of students but not all are aware of the term *zone of proximal development*.

Results

The purpose of this study was to explore how first- and second-grade teachers use DDDM and ZPD to inform guided reading instruction. I collected the data and analyzed to answer the following RQs:

RQ1: How do first- and second-grade teachers plan and implement a guided reading lesson based on students' ZPD?

RQ2: How do first and second grade use DDDM to determine the next steps in the guided reading lesson?

In the following discussion, I narrate how the theme statements for the findings addressed each of the RQs in this study. Additionally, I provide evidence from data sources to support my conclusions. Table 9 shows the alignment of the RQs to the themes from the data analysis.

Table 9

Alignment of RQ Content to Theme and Data Source

RQ		Theme		
		1	2	
Item	How do Grade 1-2 teachers …	Individualized instruction elements	Data use informs next steps	Source
1	Plan and implement guided reading lesson for students' ZPD.	*		I, LP
2	Use DDDM to determine next steps in guided reading lessons.		*	I, LP

Note. I = interview; LP = lesson plan

The results of the qualitative case study indicated that the phenomenon of instructional practices of guided reading and the use of data-driven instruction could be explained by its alignment with the constructs of the conceptual framework of this study. Vygotsky's (1962) ZPD and Leithwood's (2019) DDDM aligned with the approaches and practices of guided reading instruction used at the research sites. In addition, these conceptual frameworks further outlined and supported the teachers' use of individualized instruction during guided reading as well as their use of data analysis. On each campus, teachers worked to analyze data within their guided reading setting to individualize student instruction for guided reading.

RQ 1: Planning & Implementing Guided Reading Lessons for Student ZPD

RQ1 was informed by Theme 1 in the data analysis, indicating that ZPD-informed guided reading lessons required intentionally selecting design elements and scaffolding strategies with continuous assessment of T&L progress. All 12 participants provided lesson plan and interview data that were coded to the theme for RQ1. Overall, the theme and RQ were informed by 20 open codes that informed three aligned axial codes: design elements for ZPD-based learning activities, scaffolding strategies, and ongoing assessment of teaching and learning. In this section, I provide an overview of participant data and a discussion of the results.

During their interviews, participants shared how they plan and implement guided reading lessons based on children's ZPD. Participants also shared 1-week of multilevel lesson plans. These plans indicated how teachers worked within a student's ZPD to plan for their instruction. I then asked questions in their interview so that participants could

share specifics regarding implementing the lesson plans and how they worked to meet the needs of each student's ZPD in guided reading. Overall, the information shared by each participant was similar—the teacher's implementation of the plans varied by experience, skill, and understanding.

Using lesson plan review, interviews, and coding, I was able to narrow the data to show these occurrences. In addition, teachers in both schools use guided reading as part of their curriculum as well as the Fountas and Pinnell benchmarking system for data collection. Using these two general principles as foundational structures for the guided reading clocks for the participants, I discovered variation in participant understanding of terminology, technique, data use, and a difference in how they planned for guided reading instruction. By conducting lesson plan reviews prior to the interview, I generated additional questions specific to each participant's lesson plans to gain clarification about essential elements in the participant's planning and implementation of ZPD. Table 10 shows the alignment of interview and lesson plan protocol items and codes to RQ2 and Theme 2.

Table 10

Alignment of Lesson Plan/Interview Protocol Items & Coding to RQ1: Theme 1

RQ1: How Grade 1-2 teachers plan & implement guided reading lessons for students' ZPD			
Coding source	Theme 1: Individualized planning for guided reading		
	No. codes	Lesson plan items	Interview items
Data collection protocol		1-7	1, 3-8, 10-12
Open codes	20		
Axial codes	3		

During the interview, I asked participants questions related to RQ1. I sought to understand how participants planned and implemented guided reading in their instruction. I categorized this information by commonalities and then disaggregated to determine an overall theme for RQ1.

Design Elements for ZPD-Based Learning Activities

The axial code *design elements for ZPD-based learning activities* was derived from 11 open codes that were grouped together based on the analysis of interview data and lesson plan data of participants. Participants described their use of guided reading lessons that included content for students using F&P books and materials. These lessons included leveled high frequency words, leveled vocabulary, and leveled word work within each group that allowed for differentiated work for students based on the strategy or comprehension objectives. Through discussions and analysis, it was evident that teachers made continuous and ongoing adjustments to their grouping based on

assessments such as running records that drove their instruction. Teachers used various forms of analysis for running records to inform their instruction.

Throughout this process, participants shared many successes. Participants discussed their use of ZPD and how they incorporated it into guided reading. All participants were clear that Fountas and Pinnell benchmarks, running records, and anecdotal notes were the three biggest guiding factors in their decision-making. Participant S2G2T2 stated, 'I group students based on that data and then make my week-to-week decisions with guided reading. I look at my running records and the anecdotal notes and I may change up the groups based on what the students need." Participant S2G2T1 stated, "Using the data from running records and analyzing the data every week allows me to make more individualized instructions." The recurring themes of Fountas and Pinnell benchmarks, running records, and anecdotal notes were evident in all twelve participants' responses.

These results indicate that every teacher, even if they use the same ZPD-based design elements daily may analyze and inform their instruction differently. While all participants had the same district guidelines and ZPD-based design elements present in their lesson plans, there were variations in how they chose to analyze, plan, and individualize their instruction. As indicated by the data from these participants, individualized instruction must truly be individual, accounting for student needs and not a uniform planning guide for teachers. It is key to provide teachers with a common framework to structure the individualized-instruction process, and having identified ZPD-based design elements is helpful. However, it is also important to understand the

difficulty in achieving a balance of both the student and teacher needs.

Scaffolding Strategies

The axial code *scaffolding strategies* was derived from 10 open codes that were grouped together based on the analysis of interview data and lesson plan data of participants. When discussing scaffolding, teachers discussed interactive scaffolding, visual scaffolding, and sensory scaffolding. Within the guided reading setting, teachers allowed for students to hear what was being asked of them, see it in practice, and then take the time to complete the task. Through these progressions, students had the full range of interactive experiences. This process allows for students to see the step-by-step process broken down by the teacher, and allows for the teacher to step in and individualize instruction where it is needed. This scaffolded method of teaching also allows for a continuous ongoing environment for formative assessments to occur. In this type of guided reading setting, the teacher can ask high level questioning using the within, beyond, and about questions that go along with F&P. This type of questioning allows the teacher to maintain grade level thinking while scaffolding student learning.

Throughout this process, participants shared many successes. While participants varied in how often they used data to drive instruction, they discussed the importance of scaffolding within their guided reading groups. Participants use of information to determine the next steps for guided reading was evident. Participant S1G1T2 shared, "I might have to scaffold certain activities to help them. Taking some support away and then moving on eventually to giving them a book and hoping they will independently be able to point to those words and get the one-to-one."

Challenges to scaffolding within guided reading included wide ranges of students within one guided reading group. Additionally, not having enough time to see students due to having a wide range of leveled groups. Teachers discussed needing additional assistance so that they could spend the appropriate amount of time with each group to appropriately scaffold as needed within each group. Teachers discussed that only some classes had additional assistants, interventionists, or coaches that helped mitigate the wide range of student needs and time constraints.

Ongoing Assessment of Teaching & Learning (T&L) Progress

The axial code *ongoing assessment of teaching and learning (T&L)* progress was derived from 10 open codes that were grouped together based on the analysis of interview data and lesson plan data of participants. Teachers discussed continuous and ongoing adjustments throughout the process of guided reading. They also indicated the importance of knowing student-levels and needs to inform instruction. Many discussed informal ways to daily assess students through monitoring, general observations, questioning, discussions, and the use of anecdotal notes. Teachers discussed the need for conferencing with students both in a formative and summative way to gain information to guide their instruction. They also indicated they used conferencing for running records, student check-ins, or questioning.

Additionally, participants shared their successes. Interview and lesson plan data indicated that many participants relied heavily on their knowledge of the definition of ZPD and the use of students' strengths and weaknesses to guide their instruction. Participants often referenced using data—Fountas and Pinnell running record data

specifically—to determine students' ZPD. Participant S2G2T1 stated that,

> going back to the data that you take for conferencing notes, informal and
>
> formal assessments, and just making sure that you know each student's
>
> strengths and weaknesses in a certain skill or area, and just building on
>
> their strengths and making sure that if you add some new learning to it,
>
> then it will help them to master it.

Throughout this process, participants shared many successes. Participants often felt they knew the strengths and weaknesses of their students, which often came from their work in daily guided reading groups and work with Fountas and Pinnell assessments. Participants relied on the use of Fountas and Pinnell running records and comprehension questions related to those running record assessments as well as the cueing system (MSV) to help them know what to do once they had determined a student's ZPD. Participant S1G2T3 stated,

> Students are ready to push on to the next level if they have high accuracy and
>
> comprehension. If they have low accuracy, that might be a word work area. If
>
> they have a low comprehension, that tells you what thinking questions you need
>
> to work on.

Most participants focused on the area of high or low accuracy regarding the Fountas and Pinnell benchmarks or running records during guided reading.

When analyzing these data, I noticed that participants still relied heavily on using Fountas and Pinnell benchmark data. Two participants also discussed using the Learning Continuum, part of the Measures of Academic Progress online learning assessment. One

participant noted using Jan Richardson's guided reading format to help inform her guided reading groups. While these all are measures of data collection, it shows that some are relying on formative assessment data that happens 3-times per year to inform instruction, some are using daily formative assessments to inform instruction, and others are somewhere in the middle. Participants have the knowledge that using data to drive instruction in important, but the follow through for all participants is not there.

Participants also had the opportunity to share additional information that they felt would be important to the study. Two participants shared in detail additional information regarding ZPD that they felt would be helpful additional information. Participant S1G2T3 shared, "ZPD is important for even the earliest learners and should not be overlooked." As participants described ZPD, they often used stories and quips such as "the sweet spot" to describe their thinking.

Challenges that participants faced included application of deep thinking and knowledge of concepts. Participants often understood broad concepts applied to their classroom such as the meaning of ZPD but when asked to singularly define ZPD they were often unsure. This revelation further shows that teachers are often scratching the surface of knowledge level information regarding educational topics. Often time dictates their ability to go deeper, as with data analysis. The teaching and learning process are cyclical and while this is important, the learning outcomes from the cycle are more important than learning the cycle itself. Participant data indicated that although teachers process through the cycle, not all of them are analyzing data, missing deeper learning for themselves and their students.

Participants were able to discuss RQ1 through their lesson plans and interviews. While RQ1 concentrated on the lesson plan protocol, there was additional evidence gathered from participant interviews as well. It was important to rely on both data sources to align the data received from participants to answer this RQ. In doing so, I was able to determine the steps used by participants and determine gaps in what was occurring in the early childhood classroom in terms of DDDM and ZPD.

RQ 2: Using DDDM to Determine Next Steps in Guided Reading Lessons

This RQ was informed by Theme 2 from the data analysis, indicating that next steps in guided reading lessons are informed by student ZPD, running records, and anecdotal data from reading conferences and observations. All 12 participants provided lesson plan and interview data that were coded to the theme for RQ2. Overall, the theme and RQ were informed by 15 open codes that informed two aligned axial codes: data that informs planning and ongoing assessment of teaching and learning. In this section, I provide an overview of participant data and a discussion of the results.

Participants provided insight into the elements of RQ2 through their lesson plans and interviews. While RQ2 appears to be most informed by the interview protocol, there was additional evidence gathered from the lesson plan review as well. It was important to rely on both data sources to align the data to answer this RQ. In doing so, I was able to determine the participants'' decision-making steps to use data in executing effective guided reading activities. These data also revealed gaps in what was occurring in the early childhood classroom in terms of DDDM. Table 11 includes alignment of lesson plan and interview protocol items and coding with RQ2 and Theme 2.

Table 11

Alignment of Lesson Plan/Interview Protocol Items & Coding to RQ 2: Theme 2

RQ2: How Grade 1-2 teachers use DDDM to inform instructional decisions.			
Coding source	Theme 1: Individualized planning for guided reading		
	No. codes	Lesson plan items	Interview items
Data collection protocol		2-3, 5-8, 12	2-8, 10-12
Open codes	15		
Axial codes	2		

Data that Informs Planning

The axial code *data that informs planning* was derived from 11 open codes that were grouped together based on the analysis of interview data and lesson plan data of participants. Teachers discussed the importance of using data to inform their weekly planning for guided reading. To do this, teachers use formative observations, and assessments such as running record analysis to determine student needs. Teachers used formative and summative guided reading conferences to guide instruction and drive strategy and comprehension conversations. Students' ZPD and reading level from formative and summative assessments also informed teacher planning. Teachers analyzed student running records at the surface level for accuracy, fluency, and comprehension as well as the deeper error analysis level of meaning, structure, and visual to determine individualized planning needs for students.

Participant S2G1T1 stated, "data-driven decision-making is when teachers assess their students and analyze the results of those assessments, which helps determine where

to work with those children to move them along in their learning." The data collected

showed that most of the first- and second-grade teachers in this study used guided reading

data analysis to drive their instruction. Discrepancies in the types of data appeared

between participants. All participants were comfortable using informal data such as

anecdotal notes, observations, and monitoring through questioning. There were a few

participants who were not comfortable using the MSV analysis on running records to

inform their instruction. While there were variations, all participants shared their

experiences with guided reading, data analysis, and how it was related to planning and

instruction in guided reading.

Participants were able to define DDDM, in the confines of their own classroom.

Teachers who were trained in Reading Recovery or with ELPD spoke heavily of data

analysis and the importance of driving daily instruction with the use of running records

that have been analyzed with MSV, anecdotal notes, and observations of students. These

teachers also discussed the importance of leveled- and individualized-work based on

student needs. Participant S1G2T2 stated, "Through running records or anecdotal notes

that you are taking while you are teaching the group to inform and change your

instruction for the next day or in the moment." S2G2T3 stated, "DDDM uses data and

information to determine the strengths to build on from each student."

Participants also shared successes. Participant S1G1T4 stated, "Looking at

different assessments that you have given students and looking at the results of those

assessments to guide what you teach in guided reading." This statement sums up the

collective use of various types of data to drive instruction. The success that these teachers

in the early childhood setting showed was that they knew how to use data to drive their

instruction, it just looked different depending on the setting and training that they

independently experienced

Challenges that participants faced included variations in training and lack of

training in how to use data to drive instruction, particularly in the use of MSV with

running records. Some teachers lacked the additional training in ELPD or Reading

Recovery which left them without the knowledge they needed to dig deeper into MSV

analysis for their students. A finding from this research is that equal access to

professional development may help ensure that all staff are trained in best practices.

Ongoing Assessment of Teaching and Learning (T&L) Progress

The axial code *ongoing assessment of teaching and learning (T&L) progress* was

informed by 10 open codes that were grouped together based on the analysis of interview

and lesson plan data. Teachers showed an understanding of the cyclical part of ongoing

assessments in the teaching and learning that comes with successful guided reading

instruction. The discussed that successful guided reading occurred when they used

assessments coupled with informal observations, student monitoring, questioning, and

running records to drive instruction. This cyclical process includes assessments that are

both formative and summative.

Participants spoke of their use of running records to inform their guided reading

instruction. Between each of the 12 participants there was a variance in the time,

frequency, and type of analysis used by some participants. Participant S1G1T1 stated,

It might be that I do a running record to analyze their miscues, or I might

just be taking anecdotal notes, jotting down about their fluency, or when

we are discussing the book afterward, their comprehension.

All participants stressed that using assessments, whether informal or formal, in guided reading to inform their instruction was necessary. Some discussed formal assessments, while others used informal assessments such as running records and anecdotal notes to inform instruction.

Participants discussed DDDM and the effect that it had on their daily teaching. Participants discussed the use of running records and analyzing those running records to plan for daily teaching of skills. However, after deciding on an overall skill for the week, some participants used anecdotal notes to plan for day-to-day teaching, while others simply took the anecdotal notes and did not change groups until formal assessments such as MAP or a district mandated Fountas and Pinnell benchmark assessment had to occur. Participant S1G1T4 stated, "I plan lessons that are meaningful and build on the strengths, as well as help to teach new skills that will help them reach their next level in reading."

When analyzing the effect of DDDM on participant's instructional planning, multiple participants discussed the use of DDDM. Participants stated that using DDDM helped them plan daily, while others discussed it helping with weekly planning. Participants who stated they used or taught Reading Recovery also stated that they planned more days in their instruction based on DDDM and had more areas within their lesson plans for anecdotal notes and/revision notes throughout the week.

I asked participants if they would like to share any additional information about ZPD that would be relevant to early childhood and the study. Participant S2G2T2 shared,

"I think especially in early childhood, it is a lot about the volume of reading and that they are having success reading books that they can read easily, but also that give them a little bit of a challenge." Participant S2G1T2 shared, "it is beneficial to you and your students if you take the time to look at that data and analyze it." Participants who chose to share additional information sought to share positive thoughts on the use of data to drive instruction; there were not any negative comments shared.

Challenges that participants faced included were variations in training and lack of training in data analysis and ongoing guided reading best practices for some teachers in the early childhood setting. Some teachers had years of training in guided reading and balanced literacy instruction while others were new and did not receive the in-depth training that was provided in years prior to their arrival in the district. While external professional development should be evaluated and offered systemically, it is also something that may be provided through in-hour professional development with literacy coaches. In-depth professional development should occur each summer to provide opportunities for new or returning teachers to learn or review core teaching knowledge and skills that inform their practices.

Summary

The consensus of the participants focused on their use of guided reading and the importance of planning for individualized student learning based on the analysis of formative data. Participants indicated that their experiences individualizing guided reading was the foundation of reading success for students. Additionally, they were firm in their thoughts that effective reading instructions required analyzing running records

and daily guided reading instruction to assist in monitoring students' needs. Individualized learning was the most consistent topic for teachers in this study. Participants agreed that guided reading provides a platform for meeting students' ZPD and ensuring individualized learning.

While individualized learning was a topic of consensus, data analysis was also a highly regarded topic. Teachers discussed the need for data analysis from their daily running records to determine the next steps for guided reading. Also, this data analysis helps to determine a student's ZPD. While many sub-topics arose in the study, the two main themes from this study were: individualized instruction and data analysis. Without these practices it is doubtful that these teachers would have experienced success with guided reading or their students' reading academics.

Chapter 5 includes a conclusion to the study by presenting a breakdown of the study's findings related to the literature described in Chapter 2. It also includes an analysis and interpretation of the findings related to the presented conceptual framework. Additionally, I present an explanation of the study's limitations and trustworthiness. Further, I include recommendations for further research opportunities. I also described the positive social change that could emerge from this body of research.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this study was to explore how first- and second-grade teachers use DDDM and ZPD to inform guided reading instruction. This study addressed a gap in practice and a gap in the literature about practice regarding DDDM and ZPD to inform guided reading for instructional purposes in first- and second grade classrooms. First- and second-grade teachers do not use relevant and timely data, specifically running records, analysis of oral reading errors, self-correction rates, and word accuracy, to inform the teacher of students' performance and inform their instruction. Teacher judgment of data has been inconsistent and accurate with what teachers often perceived their judgment of student levels as (Paleczek et al., 2017). Therefore, I explored how first- and second-grade teachers use ZPD to inform guided reading instruction. The study was guided by the conceptual frameworks of DDDM, a process used by educators to collect and analyze data that can guide academic decisions for students based on identified strengths and needs (Leithwood, 2010; Little et al., 2019), and Vygotsky's (1962) ZPD.

The key findings from the study aligned with the conceptual framework guided by Leithwood's DDDM (Leithwood, 2010) and supported by Vygotsky's (1962) ZPD. Through data collection and analysis, I found there were two prevailing themes. First teachers indicated that ZPD-informed guided reading lessons require intentionally selected design elements and scaffolding strategies with continuous assessment of teaching and learning progress. To accomplish this task, they scaffolded individualized lessons with student-level data, use high-level questioning for understanding during implementation, and apply DDDM practices between lessons. Second, teachers indicated

that next steps in data-driven guided reading lessons are informed by student ZPD,

running records, and anecdotal data from reading conferences and observations. They

accomplish this task by evaluating student- and group-level data weekly—sometimes

daily—scaffolding lessons based on the data and integrating data from observations,

running records, and ZPD to select appropriate instructional strategies.

Interpretation of the Findings

Through the lens of the conceptual frameworks that guided this study,

Leithwood's DDDM (Leithwood, 2010) and Vygotsky's (1962) ZPD, I found that

teachers can decide students' reading needs based on the formative and summative data

collected during guided reading. Formative and summative data allows teachers to

instruct students based on their individualized needs as readers (Fountas & Pinnell,

2016). The research of Fountas and Pinnell as well as the framework of DDDM and ZPD

align with the findings of this study to show that teachers use guided reading to

individualize instruction for students based on data collection daily. Appropriate

planning, data analysis, and student ZPD are essential to successful guided reading in

early childhood.

Confirming and Disconfirming the Research

The results from this study support the findings of previous research. For

example, Young (2018) explained that increased emphasis on guided reading can

significantly impact second-grade students' reading ability. According to Young, using

the Developmental Reading Assessment (DRA) with second graders in guided reading

will increase students' reading ability. Based on the conceptual framework of this study,

ZPD, and DDDM, Young's research shows that using an individualized data-driven system in the early childhood guided reading setting can increase reading ability in students.

Additional research supports the conceptual frameworks of the study and shows that early childhood settings are a prime location for DDDM and ZPD and increase literacy and language education and development. Leu and Maykel (2016) determined that the use of text early in the educational setting allowed students to acquire foundational skills and knowledge. Their research also showed that students who participated in early literacy had long term success in reading and literacy. Similarly, Oslund et al. (2015) and Porter et al. (2023) discovered that the use of DDDM in early childhood settings can help to determine student needs and provide early learning supports to get students on track for reading success. This combined research shows that DDDM coupled with ZPD in the early childhood setting allows for early literacy success when used for purposeful planning to drive instruction.

Extended Knowledge in the Discipline

Results from this study support previous findings because participants noted that as students participated in the guided reading process led by their analysis of data, planning, and individualized instruction, the need to move students forward in their leveled grouping continued. Participant S2G2T2 stated, "I find that instructional level to know exactly where I need to start with them and then keep them challenged by pushing them." Using ZPD and ZPD in guided reading is essential to its success in practice and moving students forward. During the interview, participant S2G1T2 noted that

I think using what they do one day to plan for the next day; makes sure you give

them more of what they need because you are watching how they are reading

what they are successful at and how you can use that to build upon what they need

to work on.

This connected DDDM and ZPD closely to the guided reading process in the classroom.

This showed how intertwined DDDM and ZPD are in the guided reading process.

Fountas and Pinnell (2016) stated that guided reading, coupled with ZPD, centers on the

idea that people make decisions based on summative and formative data, allowing for

greater individualization.

Limitations of the Study

A limitation of this study is the small sample population. I conducted the case

study in one rural school district using first- and second-grade teachers, which may only

represent some rural first- and second-grade teachers. For this study, at least three

teachers from each grade level—first and second—from each of the two schools

participated.

I mitigated potential biases that may have influenced the study's outcome,

including personal biases of ideas on teaching reading to the target population. I was able

to avoid bias by excluding my school from the study, maintaining a strict protocol framed

by my study's framework, and sticking to the protocol during interviews. Additionally,

when reviewing the lesson plans, I used the protocol to ensure that bias did not enter into

my interviewing or analyzing.

Recommendations

There is still much to learn about how first- and second-grade teachers use ZPD and ZPD to inform guided reading instruction. Several research topics would add to this body of knowledge. In this section, I make recommendations for research based on the limitations of this study, previous research associated with this study, and strengths of the previous research related to determine the effects that DDDM and ZPD have on planning and implementation of reading in the first- and second-grade classroom.

Recommendations Based on Limitations and Previous Research

Extending the study beyond rural areas would increase the population sample of first- and second-grade teachers. It would give a broadened determination about using DDDM and ZPD to inform guided reading instruction. Additionally, increasing the number of schools in the study beyond one school district and two schools would also increase the data collected. I analyzed these data for trends and evaluated with them for subsequent outcomes. Through this study, I evaluated the of the use of broadening DDDM and ZPD in the planning and implementation of guided reading to gain a larger perspective. On a larger scale, there would be benefits to researching schools that use the balanced literacy approach, specifically the guided reading component, versus schools that use the science of reading approach to determine the effects that DDDM and ZPD have on planning and implementation of reading in the first- and second grade classroom.

Data from classroom observation were not included in this study. While participants had evidence of the RQs in their lesson plans and discussed specific activities and outcomes during their interviews, it would have been ideal to see follow-through in

the classroom. Due to COVID-19, classroom observations were not an option for this study. In the future, adding a data collection component of live classroom observations to view data collection, analysis, and guided reading in the classroom would strengthen this study.

Recommendations Based on Strengths and Previous Research

Research that would also add insight into the field of education would be determining if DDDM and ZPD influence the planning and implementation of guided reading in all elementary grades, first through fifth. This could help determine how upper elementary grades data compare to the lower elementary grades. Additionally, this could provide insight into the implications for using DDDM and ZPD in the upper elementary grades. This research opportunity could provide data to support teachers' use of DDDM across the grade levels when planning for and implementing guided reading instruction.

Implications

Social Change Implications

The findings of this study have the potential in creating positive social change for teachers who use ZPD and ZPD to inform guided reading instruction. Positive social change may occur through increased professional development centered around guided reading and data-driven instruction for first- and second-grade teachers. Positive social change may occur from a social understanding of how teachers can use DDDM and ZPD to inform guided reading and lead to closed achievement gaps and fewer students left behind in reading at an early age. This would broaden local literacy levels as well as societal literacy levels moving forward. This could lead to greater discussions on the

impact of early literacy education in other countries and how that will transcend into global awareness of literacy.

Implications for Practice

Teachers of first and second graders can use these findings to begin targeting strategies that focus on DDDM to individualize student learning and analyze student data to target areas of student need when planning and implementing guided reading for their students. When teachers began to utilize DDDM and ZPD when planning and implementing guided reading, they started to see the benefits of pinpointing strategies to help students succeed. In turn, these enhanced learning opportunities could lead to better academic support for students paired with higher reading achievement levels.

As additional opportunities spread to other teachers and grades, additional opportunities could be available for students. These learning opportunities can potentially affect students' learning outcomes and lead to better academic success. By improving student outcomes, the possibility of increased use of DDDM and ZPD to plan and implement guided reading may increase in the first- and second grade setting.

With the information in this study, students can experience guided reading opportunities driven by DDDM. The students may only experience reading success with the pinpointed findings of targeted, individualized learning and the use of data analysis to drive instructional planning and implantation of guided reading. Through this knowledge, first- and second-grade teachers can enhance their instruction by offering individualized learning experiences driven by the data that they collect daily for their students. They can further enhance their instruction by analyzing the data to drive their daily instruction to

meet those individualized student needs within the guided reading setting. The data from this study can alter the way that teachers plan for and implement guided reading in the first- and second grade setting as well as alter the learning outcomes for students in a positive way.

I will disseminate the information from this study to educators through professional development sessions after the study's approval. I will hold these sessions at local reading conferences and schools interested in increasing their knowledge of how first- and second-grade teachers use ZPD and ZPD to inform guided reading instruction. I published the findings of this study in ProQuest, an online research publication that anyone interested in this research topic can access. The findings from this study will lead to awareness of DDDM and ZPD and their invaluable impact on the planning and implementation of guided reading in first- and second grade classrooms.

Conclusion

Teachers enter classrooms daily ready to make a difference for every child, whatever it takes. This mentality is often affected by regulations, politics, and additional job-related duties. Often teachers use judgment that they perceive to be at the highest level when it falls short. While teachers often feel confident in using their judgment of students' ability, they are not always accurate in being the judge of student needs and should use relevant and timely data to drive their instruction (Paleczek et al., 2017). The district literacy specialist said that teachers are using their own personal judgment or generalized ideas even though the data are present (District Literacy Specialist, personal

communication, January 7, 2020), confirming that the problem indicated in the research happening in the schools.

Through the lens of the conceptual frameworks of DDDM, a process used by educators to collect and analyze data that can guide academic decisions for students based on identified strengths and needs (Leithwood, 2010; Little et al., 2019), supported by Vygotsky's (1962) ZPD, instructing students within their ZPD is necessary to ensure that optimal learning takes place during instruction (Vygotsky, 1962), RQs were created to investigate how do first- and second-grade teachers plan and implement a guided reading lesson based on children's ZPD and how teachers use ZPD to determine next steps in the guided reading lesson. I created questions to present in interviews and guided reading lesson plans protocols based on the conceptual frameworks of the study. The data collection showed the importance of these theories and how the use of DDDM and ZPD shape guided reading instruction for first- and second-grade teachers.

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Appendix A: Guided reading Lesson Plans Protocol

Study: Early Childhood Teachers' Use of Data-Driven Decision-Making for Guided Reading

Date: _____

Time of Document Review: _____ Location of Document Review: _____

Reviewer: Caroline J. Davis Teacher ID: _____

Item	Topic to Identify in the lesson plan	(Y/N)	My Notes: How are they being used?	Additional Questions to Add to Interview?
	Does this plan encompass 1 week of Guided Reading?			
	If YES, proceed. Do the plans address the following:			
1	Evidence of a book introduction will be conducted by the teacher that includes a brief discussion of the plot, characters, and the problem?			
2	Evidence of new content and high frequency words in the story to be introduced?			
3	Evidence of a comprehension focus of the book will be provided by the teacher?			
4	Evidence of students engaged in read silently while the teacher takes running records? (This may be shown in the form of a group list of students to be seen that day.)			
5	Evidence of a discussion centered on the comprehension focus?			
6	Evidence of a short word work activity will be provided?			
7	Evidence of a short text dependent writing activity will be provided?			
8	Evidence of the use of DDDM? If so, how?			
9	Evidence of the use of students' ZPD? If so, how?			
10	Additional evidence of DDDM?			
11	Additional evidence of ZPD?			

Guided reading Lesson Plans Protocol Part 2: Teacher Protocol

Introduction	Present (+)/ Not Present (-)	Comments
Book introduction		
High frequency words		
Comprehension focus		
Individual student reading engagement		
Discussion of comprehension		
Word work activity		

Student ZPD centered (Y/N): _____   Instructional Level (Y/N): _____

Evidence:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Appendix B: Interview Protocol

Interview Protocol

Title of Study: Early Childhood Teachers' Use of Data-Driven Decision-Making for Guided Reading

Date**: _____**
Time of Interview: _____
Interviewer: Caroline Davis
Interviewee: _____
Location of Interview: _____

Caroline Davis (interviewer): "Hello and Welcome: My name is Caroline Davis. I am the reading coach at a local school and currently finishing my 25th year with the district. Thank you so much for agreeing to participate in this study. I appreciate and respect your time and willingness to participate in this research study, and I hope that you will find value in the experience. I emailed a copy of the "Informed Consent" form to you, as discussed in the email, but if you have not signed it, I will now provide a hard copy for you to sign before we begin."

Qualifications & Informed Consent Check:
_____ Currently teach first or second grade
_____ have taught 1or more years
_____ teach guided reading
_____ is certified and licensed
_____ Informed Consent Check:(Have extra copies on hand)
_____ Interviewer asks: "Did you email the consent form or reply "I consent" to
           the informed consent email that was sent to you?"
           _____ If yes, make sure it is signed.
           _____ If no, provide a hard copy to be signed
Interviewer review rights,
     "Do you have any questions for me about the study or information contained on
     the Informed Consent Form?

Ground Rules:
Thank you for your consent to participate in the doctoral research study.

• It is important that you speak about your own experiences and from your perspective and avoid generalizing or speaking about others' experiences.

• Please respect and ensure the privacy of students, parents, families, and colleagues. There is no need to disclose specific names of individuals. You can speak about people in general terms like he/she or they/them.

"Do you have any questions?"

Purpose
"The purpose of this interview is to explore how early childhood teachers use data-driven decision-making and ZPD to inform guided reading instruction. I invite you to openly relate your experience about this topic. The more details you can provide to the questions, the better. If you agree, this interview will be recorded, so there is no need for concern that something will be missed in the data review or that you are providing too much detail.

_____**Do you agree to be recorded? If yes, proceed. If no, begin detailed notes.**
The questions in this interview are intended for you to share your experiences relating to your use of data-driven decision-making and ZPD to inform guided reading instruction. During the interview, I may ask questions that seek clarification about what you are discussing or ask you to provide examples to elaborate on aspects related to the topic."

"Do you have any questions?"
Time Check: _____

Interview Questions:
Background and Knowledge of Literacy and Guided Reading
1. How long have you been teaching guided reading in first and second grade?

Implementation of ZPD and ZPD
1. How would you define DDDM?
    a. Tell me more about…
    b. Please give me an example of…
2. How do you use DDDM to inform your guided reading instruction?
    a. Tell me more about…
    b. Please give me an example of…
3. How does the use of DDDM affect your daily teaching?
    a. Tell me more about…
    b. Please give me an example of…
4. How does the use of DDDM affect your instructional planning?
    a. Tell me more about…
    b. Please give me an example of…
5. What additional information would you like to share about DDDM to inform guided reading instruction?
6. What data guide your guided reading instruction?
7. How do you define *zone of proximal development* (ZPD)?
8. How do you determine a student's ZPD?
    a. What do you do when you have determined the students' ZPD?
        i. Tell me more about…
        ii. Please give me an example of…

      b. How does this information change how you instruct the student?
         i. Tell me more about…
         ii. Please give me an example of…
      c. How do you use this information to determine the best use of their guided reading data and determine the next steps for guided reading instruction?
         i. Tell me more about…
         ii. Please give me an example of…
9. How do you incorporate ZPD into your teaching of guided reading?
10. What additional information would you like to share on the use of ZPD to inform guided reading instruction?

Probing Question examples:
• Tell me more about…
• Give me an example of…
• Tell me about that?
• What makes you feel that way?

Questions for interview that are derived from lesson plan notes:

1:
2:
3:

Probing Question examples:
• Please tell me more about…
• Give me an example of…
• Tell me about that?
• What makes you feel that way?

Time Check: _____

Thank you for participating in this dissertation research study.
I would like to express my appreciation and thanks for your participation in this dissertation research study. Thank you for taking the time to share your perspective and expertise on the topic. I want to assure you again that your responses are confidential. In conclusion, if needed, we would like to request your permission to contact you for follow-up information.

Appendix C: Data Coding Analysis Matrix

Coding & Thematic Analysis Matrix by RQ	Revised Axial Codes			
	Design elements for ZPD-based learning activities	Scaffolding strategies	Ongoing assessment of teaching & learning progress	Data that informs planning
THEME 1—RQ1→	Required for planning & implementing ZPD-informed guided reading lessons			
THEME 2—RQ2→			Required for next steps in DDDM guided reading lessons	
RQ Construct→	ZPD	ZPD	ZPD/DDDM	DDDM
Open Codes (*n* = 26)	*n* = 11	*n* = 10	*n* = 10	*n* = 11
1. Continuous/ongoing adjustment	X	X	X	
2. Assessments drive instruction	X		X	X
3. Monitor			Formative	
4. Observations			Formative	X
5. Objective: strategy and comprehension differentiated	X			X
6. Content: Crafting guided-reading for ZPD	X			
7. Leveled high frequency words	X			
8. Leveled vocabulary	X			
9. Leveled word work	X			
10. Objective: broken into steps		X		
11. 3 types scaffolding: sensory, interactive, graphic (visual)		X		
12. Show/Tell		X		
13. Intro vocab		X		
14. Pause/teach/pause/review		X		
15. High-level questioning: Within, beyond, and about questioning		X		
16. Questioning for understanding—thinking on Grade level		X	Formative	
17. Grouping	X	X		
18. Discussion points—for comprehension			Formative	
19. Guided & independent reading conferences—Formative		X	Formative	X
20. Guided & independent reading conferences—Summative			Summative	X
21. ZPD/Reading Level—Formative			Formative	X
22. ZPD/Reading Level—F&P			Summative	X
23. Anecdotal notes: to inform next steps				X
24. Running record (RR) analysis drives instruction	X			X
25. RR1: accuracy, fluency, comprehension:	X			X
26. RR2: Analyze sources of information: meaning, structure, visual (MSV)	X			X

Vertical row-group labels: Rows 6–18 — "ZPD Elements or Scaffolding"; Rows 19–26 — "Data Types"