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Early Childhood Educators' use of Students' Assessments for Data-driven Decision Making

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This is to certify that the doctoral study by

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Walden University
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Abstract

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for Data-driven Decision Making

by

Brandy Shanice Jones

MSP/BH, Phoenix University, 2016

BSED/E, Phoenix University, 2014

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

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November 2020

Abstract

The research problem addressed by this study is that educators do not know how students' assessments are being used for data-driven decision making to plan for instruction and design curriculum. Data-driven decision making has been implemented throughout the Southeastern region of the United States for several years as part of public-school reform efforts. The purpose of this basic qualitative study with interviews was to explore how early childhood principals, academic coaches, and teachers used students' assessment data for data-driven decision making to plan for instruction and design curriculum in two rural schools. This study addressed local concerns about how educators used students' assessments for data driven decision making to plan for instruction and design curriculum. The Gill, Borden, and Hallgren data-driven decision making framework guided this study. Following collection of data from semistructured interviews with 2 principals, 2 academic coaches, and 8 teachers, data were analyzed using open-coding followed by descriptive and structural coding. Findings revealed that educators systematically used assessment data during preliminary activities (accessing, comparing, and analyzing the previous year student assessment data), continuous activities (monitoring students' mastery and identifying appropriateness of curriculum), and culminating activities (reviewing and evaluating current year data for planning future instruction and designing curriculum). This study contributes to positive social change by promoting a collaborative climate among all educators to systematically use students' assessment data to plan for instruction and design curriculum.

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Dedication

I want to dedicate this piece of work to my Mom and Dad. I watched my mom make sacrifices to continue to ensure that I had all that I needed. Every sacrifice you made was for this moment right here, I hope I continue to make you proud. To my dad, for those individuals who didn't realize your potential they will now see your gifts through me. To my Noah and Elijah; this is dedicated to you also, keep this as a reminder that hurdles may slow you down but keep moving, eventually you will get to the finish line. Lastly, I want to dedicate this work to 10 year old Brandy S Jones. The little girl that believed she lost everything and there was nothing for her. The little girl who couldn't realize her dreams yet. The little girl who quickly learned how to dust herself off again and keep moving. The little girl who continued to walk by faith and not by sight. The little girl despite those who said she couldn't still tried to dream. Thank you, because I know without you pushing despite circumstances, this would have been a dream deferred.

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Chapter 1: Introduction to the Study

Data-driven decision making (DDDM) is a process of making decisions based on data rather than intuition or observation alone (Miller, 2019). DDDM is the systematic analysis of student data from internal and/or external sources of a school to drive teachers' educational planning and practices (Prenger & Schildkamp, 2018). In alignment with the No Child Left Behind Act and currently Every Student Succeeds Act, DDDM has been implemented throughout the early childhood education (ECE) system.

The effects of DDDM have been a topic of interest for educators throughout the years (Varghese & Garwood, 2017). Although the effects of DDDM have been studied over time, researchers have suggested that there needs to be further research on how educators are using different student assessment data to make decisions about instruction (Grant, & Sander, 2017; Park, 2018; Rasinski et al., 2017). Bratsch et al. (2017) found that when educators use student assessment data to plan for instruction and design curriculum there are positive impacts on student achievement. The research problem addressed by this study is that educators do not know how students' assessments are being used for DDDM to plan for instruction and design curriculum. To effectively implement DDDM at the campus level, all educators need to work together as a team in a climate of data use (Curry, Mwavita, Holter, & Harris, 2016; Gill, Borden, & Hallgren, 2014; Reeves, 2017). As a response to this gap in practice at both the local level and the national level where DDDM is being implemented, I sought to explore how principals, academic coaches, and teachers used students' assessment data for DDDM in two rural schools in the Southeastern region of the U.S. The study's findings contribute to positive

social change because assessment strategies and DDDM tools that resulted in teachers' effectiveness and students' academic successes were revealed in this study. In this chapter, I present a background of this study and highlight the problem statement, purpose, research questions, conceptual framework, definition of terms, assumptions, scope and delimitations, limitations, and significance of the study.

Background

DDDM is a current educational reform initiative being implemented across the United States (Bratsch, Vernon, Varghese, & Garwood, 2017; Datnow & Hubbard, 2015). Nationally, school improvement initiatives have focused on educators' use of DDDM to plan for and deliver instruction in ECE (Bratsch et al., 2017; Datnow & Hubbard, 2015; Rasinski et al., 2017). Over the years, a state Department of Education in the Southeastern U. S. has implemented a number of educational initiatives. More recently, DDDM has been a part of the "data-driven education system" initiative created by the Department of Education in the state (New, 2016, p. 3). DDDM requires educators to review a number of data items (e.g. assessments, instructional strategies, work samples, school district scoring data) to make decisions concerning instruction and curriculum design (New, 2016). In this study, I explored how early childhood principals, academic coaches, and teachers used student assessment data to plan for instruction and design curriculum.

There have been several studies that suggested benefits of DDDM to plan for instruction and design curriculum; however, researchers have recommended that further studies are needed to identify how educators use students' assessments for DDDM

(Datnow & Hubbard, 2015; Jefferson, Grant, & Sander, 2017; Rasinski et al., 2017). Bratsch et al. (2017) found that educators' use of student data to plan for instruction and design curriculum has resulted in a positive impact on student achievement; and suggested further research needs to be done to identify how and why teachers choose certain instructional strategies based on students' data. According to the Department of Education in the state, stakeholders do not have an understanding of how teachers use students' assessments for DDDM to plan for instruction and design curriculum (Redacted Department of Education, 2018). Findings from this study make an original contribution to the field of ECE by aiding educational stakeholders' understanding about how assessments are used by educators for DDDM to plan for instruction and design curriculum.

Problem Statement

The research problem addressed by this study is that educators do not know how students' assessments are being used for DDDM to plan for instruction and design curriculum. Stakeholders at the local level do not know how educators use students' assessments for DDDM and would like to learn more about how educators use DDDM to plan for instruction and design curriculum (District Administrator, March 2019, personal communication). King and Sims (2016) suggested there is a need for stakeholders in schools to understand how educators use students' assessments to plan for instruction and design curriculum to support student learning in early childhood classrooms. During the 2017-18 and 2018-19 academic years, the Department of Education in the state focused on an initiative to assist each school district of the state in implementing a school

improvement plan that incorporated DDDM as part of a *System of Continuous Improvement* (Redacted Department of Education, 2018). The local district provided training on DDDM after representatives from the state's Department of Education held focus groups with district administrators around the state (Redacted Department of Education, 2018).

Purpose of the Study

The purpose of this study was to explore how early childhood educators use students' assessments for DDDM to plan for instruction and design curriculum. The study addressed local concerns, as well as a gap in the literature on practice. To address the study problem, a basic qualitative study with interviews was conducted. Findings of data analysis of study participants' interview transcripts provided a greater understanding about how educators use students' assessments for DDDM in early childhood education.

Research Questions

The following two research questions were created to guide the qualitative study. The term educators in this study refers to principals as instructional leaders who are responsible for overseeing instruction and curriculum and as academic coaches who are responsible for mentoring teachers who deliver instruction and design curriculum. The research questions follow:

RQ1: How do early childhood educators (i.e., principals, academic coaches, and teachers) use assessments for DDDM to plan for instruction?

RQ2: How do early childhood principals, academic coaches, and teachers use assessments for DDDM to design curriculum?

Conceptual Framework

The conceptual framework is based on the framework for DDDM developed by Gill, Borden, and Hallgren (2014). According to Gill et al., data-use activities must be grounded in a theory of action. The general theory of action for DDDM involves three sequential steps that when used together result in improved student outcomes (Gill et al., 2014). The sequential steps involve the following: (a) assemble high-quality raw data; (b) conduct analysis that ensures resulting data are relevant and diagnostic; and (c) use relevant and diagnostic data to inform instructional and operational decisions (Gill et al., 2014). More recently Faber, Glas, and Visscher (2017) suggested a framework similar that consisted of four cycles. The cycle consists of evaluating, setting goals, determining a strategy, and executing a strategy (Faber et al., 2017). The conceptual framework for data-driven decision making will guide the research questions, methodology, data collection, and data analysis of this study. Chapter 2 will provide an in-depth look at the conceptual framework for this study.

Research questions one (RQ1) and two (RQ2) are guided by the DDDM framework developed by Gill et al. (2014). The study explored how early childhood educators use students' assessments by discovering the three steps of a theory of action are followed to assemble data, conduct analysis on relevant and diagnostic data, and use data to inform decision making to plan for instruction and develop curriculum. In order to answer the research question, I conducted a basic qualitative study with interviews. This method allowed me to gather data from semi-structured audio-taped interviews from early childhood educators. Interview questions were aligned with research questions,

which were grounded in the conceptual framework. The conceptual framework guided the data analysis. During the analysis of data, I followed the three steps in the theory of action by Gill et al. to code data and identify themes. This section highlights the conceptual framework selected for the study. A more detailed analysis and explanation of the key elements of the framework is provided in Chapter 2.

Nature of the Study

A basic qualitative study with interviews design was followed to explore how educators' use students' assessments for DDDM to plan for instruction and design curriculum. A basic qualitative study was a viable research paradigm because it is often used in the field of education (Hammarberg, Kirkman, & Lacey, 2016). Qualitative methods are used in this field to answer questions about experience, perspective, and meaning (Hammarberg et al., 2016). In qualitative research, the researcher is considered the instrument, and subjects become participants who may contribute to rich data to be coded, interpreted, and analyzed (Hammarberg et al., 2016).

A basic qualitative study with interviews was appropriate for this topic because findings from the study provided a greater understanding of educators' use of students' assessments for DDDM in early childhood education. Qualitative interviews were appropriate for collecting information because this process allowed participants to express their beliefs, behaviors, and experiences in their own way (Jamshed, 2014). The semi-structured interviews were conducted face-to-face via video conferencing. The study's participants included early childhood educators in two rural elementary schools in one Southeastern state in the United States. Eight third-grade teachers, two

administrators, and two academic coaches were recruited and invited to participate. The responses from semi-structured interviews were digitally audio-recorded and transcribed by me. An analysis of the transcript was conducted using an open-coding method. According to Yi (2018), coding allows the researcher to identify common themes and present the data in a structured manner.

Definitions

Curriculum is comprised of adopted educational standards, concepts, and content that is supported by educational resources, delivered through pedagogical practices that import knowledge, understanding, skills, and dispositions, and aligned with assessments based on what students are expected to learn while they are in school (see Oh & Rozycki, 2017).

Data-driven Decision Making is a system applied in schools today as a reform effort requiring school stakeholders to collect and analyze data from a variety of sources in order to address learning needs and improve student performance (Schifter, Natarajan, & Kirchgessner, 2016).

Early Childhood Education (ECE) represents a pivotal opportunity to improve the developmental trajectories of young children, and evidence-based practices (Farley, Brock, & Winterbottom, 2018).

Formative Assessments are assessments that take place during learning to evaluate how students are learning material during the period of instruction (Zook, 2017). Formative assessments in the classroom include quizzes and tests (Zook, 2017).

Instructional Strategies are methods that teachers follow to engage students in active learning (Meador, 2019). Instructional strategies are pedagogical tools that support instruction as teachers address standards and objectives to ensure students meet learning targets (Meador, 2019).

Student Assessments refers to the collection and analysis of information to improve student teaching (Fisher, 2019).

Summative Assessments refer to assessments that are given to students at the end of the instructional unit (Renard, 2017). The summative assessment is compared to a standard or a benchmark assessment (Renard, 2017).

Assumptions

This study was based on several assumptions. The first assumption was that responses from eight third-grade teachers, two administrators, and two academic coaches would be truthful responses. Second, it was assumed that participants possess the knowledge and experience to share their perspectives on use of students' assessment for DDDM. Third, it was assumed that the interview questions, in conjunction with analysis of the interview responses, would appropriately address the research questions.

Scope and Delimitations

The scope of the research was confined to include educators' use of students' assessments for DDDM to plan for instruction. The research also included how educators use students' assessments for DDDM to design curriculum. This study was delimited to include only two schools, eight third-grade teachers, two administrators, and two academic coaches.

Limitations

The study was limited to only 12 early childhood stakeholders in two rural elementary schools in a Southeastern state in the United States. Purposeful sampling was used to intentionally select participants (Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, 2015) to better understand how educators use student assessments for DDDM. The findings of the study represent a small number of teachers, administrators, and academic coaches. Participants' knowledge may not be generalized to the entire field of early childhood education. Although I ensured the confidentiality of participants and organizations, some organizations were reluctant to grant study permission out of concerns that the research may expose lack of knowledge or skills among educators and reflect poorly on the organization. Limitations of the study also included individuals from diverse educational levels. However, the study can be used as an informational tool and contribute to positive social change for the ECE community by providing knowledge about the importance of DDDM.

Significance

Across the U.S., school district personnel have been responsible for encouraging student success by elevating student achievement and closing the achievement gap (Meyers et al., 2017). Nationally, school improvement initiatives have focused on educators' use of DDDM to plan for and deliver instruction in ECE (Bratsch et al., 2017; Datnow & Hubbard, 2015; Rasinski et al., 2017). Rasinski et al. (2017) found that pre-assessments are beneficial for DDDM. However, Rasinski et al. suggested use of assessments in DDDM is under-researched and that further research is needed to

understand the importance of all student assessments that are used for DDDM. In conducting a search of the literature, I was unable to identify further current studies that have specifically investigated how educators use students' assessments for DDDM (Bratsch et al., 2017; Datnow & Hubbard, 2015). Filderman, Toste, Didion, Peng, and Clemens (2018) suggested that educators' use of students' instructional data for DDDM is effective for strategic instructional planning, goal setting, differentiating instruction, and writing lesson plans. Jung, McMaster, and DelMas (2017) found that when teachers use a DDDM framework, there are positive outcomes for all students. Researchers have also identified that those using student assessments for DDDM can positively impact curriculum design (Burns et al., 2015). Findings from this study make an original contribution to the field of ECE by aiding educational stakeholders in understanding how educators use assessments for DDDM to plan for instruction and design curriculum. The study's findings also contribute to positive social change by revealing assessment strategies and assessment tools teachers use to generate students' assessment data. The study also reveals areas for improvement when educators engage in use of students' assessments for DDDM to plan for instruction and design curriculum.

Summary

DDDM has become a part of the education initiative to ensure student success (Abbott & Wren, 2016). Researchers have suggested that there is limited research on how educators use students' assessment data for DDDM (Jefferson, Grant, & Sander, 2017). This study addressed a gap in the research on practice. The study was conducted as a basic qualitative study with interviews where data were collected from eight third grade

teachers, two administrators, and two academic coaches in Southeastern United States. The data consist of interview transcripts that were taken from recorded interviews, transcribed, coded, and analyzed.

This chapter served as an introduction to the study. In this chapter, I presented background information, the problem, the purpose statement, research questions, the conceptual framework, the nature of the study, and definitions. In addition, I reviewed assumptions, delimitations, and limitations of the study. Chapter 2 will include an overview and synthesis of the existing research on DDDM.

Chapter 2: Literature Review

The research problem addressed by this study is that educators do not know how students' assessments are being used for DDDM to plan for instruction and design curriculum. The purpose of this qualitative study was to address local concerns, as well as a gap in the research on practice, by exploring how early childhood educators use students' assessments for DDDM to plan for instruction and design curriculum. To have a better understanding of the problem, I will present research on both DDDM in ECE and use of students' assessments in DDDM. In this chapter, I include my literature search strategies, describe the conceptual foundation of the study, and review current research that is pertinent to the purpose of this study.

Literature Search Strategy

In order to complete the literature review, I accessed databases using the Walden University Library and included Education Source, ERIC, PubMed, EBSCO Host, Google Scholar, Google, and CITE Journal. I also used government and agency websites such as those of the state Governor's Office of Student Achievement (Redacted School Grade Reports) and the state's Department of Education to supply information about the early childhood DDDM initiative. Search terms included the following: *assessment use in early childhood education, teacher use of data, administrators use of data, data-driven decisions, data-driven instructional practices, teacher perceptions of data-driven decision making, data-driven decision making using student assessments, early childhood assessments, impact of data on decision making in early childhood education, data-driven decision making teams,* and *data-driven decision making for curriculum*.

Conceptual Framework

The conceptual framework that best supported this study was based on the DDDM framework created by Gill et al. (2014). This section includes a discussion of the background and theory of this framework. In addition, I provide a brief discussion of relevant studies.

Data-driven Decision-Making Framework

Recently more states, districts, and schools are searching for strategies to help raise student achievement (New, 2016). According to Gill et al. (2014), data-use activities must be grounded in a theory of action. The general theory of action for DDDM involves three sequential steps that, when used together, result in improved student outcomes (Gill et al., 2014). The sequential steps involve the following: (a) assemble high-quality raw data; (b) conduct analysis that ensures resulting data are relevant and diagnostic; and (c) use relevant and diagnostic data to inform instructional and operational decisions (Gill et al., 2014). These sequential steps can lead to improved student achievement and the supports needed to make effective data use possible (Gill et al., 2014). The three sequential steps are defined below in table 1.

Table 1

Sequential Steps Defined

Sequential Steps	Definition
A.) Assemble high-quality raw data	Based on the decision, data can be collected through formative, summative, and diagnostic assessments of students. These forms of data are considered high-quality raw data. Administrative records, standardized tests, and student records are

	also considered high-quality raw data.
B.) Conduct analysis that ensures resulting data are relevant and diagnostic	When using data to make decisions that will improve student outcomes, the data must be relevant to the decision maker and make an appropriate diagnostic for the decision at hand.
C.) Use relevant and diagnostic data to inform instructional and operational decisions	A culture of data use is necessary to ensure that data are not filed away or forgotten. In order to improve outcomes, it is important to use the best data and the best analysis that will impact instructional and operational decisions.

Recent research has demonstrated the steps outlined in the DDDM framework. According to Martone, Reagan, and Reed (2018), formative assessments (specifically interim assessments) in subjects such as math can inform instructional practices and improve student achievement. Faber, Glas, and Visscher (2017) stressed the importance of analyzing and using relevant data to impact instructional decisions in the classroom. Together, these studies confirmed that following the three sequential steps outlined in DDDM framework can improve student achievement (Faber et al., 2017; Martone, 2018).

Instructional Leaders as Decision Makers and their Data Needs

Based on the framework created by Gill et al. (2014), the meaningfulness of data begins with who will be analyzing or reviewing the data. It is important that the purpose is also defined when analyzing or reviewing data (Gill et al., 2014). Classroom teachers, instructional support staff (i.e. academic coaches), and administrators (i.e. principals, assistant principals) are all examples of decision makers. Principals are the instructional leaders for a campus and use data to support instructional and curriculum needs on their campus (Vogel, 2018). When early childhood teachers use data, the purpose is to assess

the needs, progress, and strengths of their students (Gill et al., 2014). Jung, McMaster, Kunkel, Shin, and Stecker (2018) suggested that classroom teachers' use of DDDM can improve educational outcomes for all early childhood students across the disciplines of reading, mathematics, and spelling/writing.

Administrators' data use includes assessing school-wide performance and progress (Gill et al., 2014). Administrators, as the instructional leaders on their campuses, also use data to set goals and develop curriculum design and policies (Gill et al., 2014). In order to make decisions, administrators need raw data on outcomes, practices, and contributions of individual teachers to student achievement growth, and data on the performance of individuals in leadership positions (e.g. principal, assistant principals, academic coaches) (Gill et al., 2014). Jingping, Johnson, and Przybylski (2016) found that when administrators use data to provide leadership and contribute in positive ways, they impact school-wide performance, progress, and growth.

Current Study and Data-driven Framework

The conceptual framework guided the research questions, methodology, data collection, and data analysis. RQ1 and RQ2 are guided by the DDDM framework developed by Gill et al. (2014). By following three steps based on a theory of action outlined by Gill et al. (2014), I explored how early childhood educators use students' assessments for DDDM to plan for instruction and design curriculum. I explored how educators assemble data, conduct analysis on relevant and diagnostic data, and use data to inform instruction and develop curriculum. Currently, limited research exists on how early childhood educators use student assessments for DDDM. Previous research has

used the DDDM framework created by Gill et al. (Harris, 2018; Hawn, 2019; Jia, Hall, & Song, 2015; Sorrells, 2019).

Literature Review Related to Key Concepts and Variable

To understand the important role that DDDM plays in early childhood education, I will discuss the history of DDDM in education in this section. I will then address the tools used. Current research on DDDM highlights the need for future research concerning DDDM.

History of Data-Driven Decision Making in Education

DDDM is a core activity in schools (Bratsch et al., 2017; Rasinski et al., 2017; van der Scheer & Visscher, 2016). DDDM requires a systematic approach of collecting, analyzing, and applying data to address student needs and enhance student performance (Schifter, Natarajan & Kirchgessner, 2016). Researchers have suggested that DDDM can improve student achievement and learning (Lai, Wilson, McNaughton, & Hsiao, 2014; McNaughton, Lai, & Hsaio 2012; Poortman & Schildkamp 2016; Van Geel, Keuning, Visscher & Fox, 2016).

DDDM is used in education to identify appropriate instructional strategies for different types of learners (Washington, 2015). Instructional strategies play an important role in increasing student achievement. Researchers have suggested that using DDDM to identify appropriate instructional strategies improves individual student achievement (Bratsch et al., 2017; Rasinski et al., 2017; van der Scheer & Visscher, 2016). DDDM is used by classroom teachers and campus administrators (i.e. principal, assistant principals, academic coaches). Researchers suggested that administrators use DDDM for guiding,

sustaining, and developing change initiatives to make improvement in schools (Mandich, 2012; Wang, 2019). More recently, administrators are using data for accountability in developing, guiding, and sustaining organizational change in schools that leads to improvements in student learning (Wang, 2019).

Tools for Data-driven Decision Making

There are a number of tools that are used for data analysis. Researchers have identified how important both informal and formal assessment data are used to identify effective instructional strategies (Elleman, Olinghouse, Gilbert, Spencer, & Compton, 2017; Filderman et al., 2018; Jung et al., 2017). Researchers have suggested that data collection is important to DDDM (Love, Horn, & An, 2019). The tools that are used to collect data must be efficient and aligned with the data that are being analyzed (Schildkamp, 2019). According to Schildkamp (2019), both “formal data” and “informal data” are used in education (p. 261). Formal data are systematically collected information about schools, parents, teachers, and school leaders (Schildkamp, 2019). Formal data include structured classroom observations, progress monitoring, and assessment results (Schildkamp, 2019). The effectiveness of students monitoring their own progress, which leads to increases in positive student outcomes, has also been confirmed by Jenkins, Schulze, Marti, and Harbaugh (2017) with students receiving special education services. Informal data is everyday information that teachers collect on their students (Schildkamp, 2019). Informal data includes observations, conversations, and engagement during lessons(Schildkamp, 2019).

Assessments can play an important part in DDDM as well. According to King (2019), a comprehensive assessment system allows educators to identify an individual student's needs, strengths, and weaknesses. A high-quality assessment system needs to be culturally and linguistically appropriate for the students being assessed (King, 2019). Assessments are not only used to collect data, but are analyzed to inform decisions about classroom instructions, learning environments, and curriculum (King, 2019). King suggested that as educators analyze assessment data, they should look for patterns that indicate students' strengths and areas needing instructional support (King, 2019). Ongoing, multiple methods of authentic assessments allow educators to capture data that reveals students' learning and development across settings over time (King, 2019).

Jefferson, Grant, and Sander (2017) focused on using reading assessment data to identify the needs of students. Teachers who used students' assessment data to add evidence-based differentiated reading instruction were more successful in meeting the needs of students (Jefferson, Grant, & Sanders, 2017). January et al. (2018), Jenkins et al., (2017), and Panolpho (2018) found that collecting students' progress-monitoring data may be a viable option for ensuring that those at risk for reading difficulties are improving. Further, monitoring data allows teachers to identify instructional strategies students may need (January et al., 2018). Curry, Mwavita, Holter, and Harris (2016) suggested that when data are used to inform instruction, data use can help teachers create effective lessons and practice reflective teaching.

Data Used to Inform Instruction

When school administrators provide leadership and support for teachers (Meyers, Graybill, & Grogg, 2017) and set a climate for collaboration in DDDM, teachers are able to effectively engage in DDDM to positively impact student achievement (Faber, Glas, and Visscher, 2017). The converse is also true. Dunlap and Piro (2016) found that before the involvement of school leaders, teachers expressed a sense of discomfort with using students' assessment data to plan for instruction. Schildkamp, Poortman, Ebbeler, and Pieters (2019) suggested that when school leaders establish expectations for DDDM, the school community can build effective data teams and increase the confidence of teachers. School leaders work to create a climate for data use by assigning academic coaches to work with reluctant teachers (Snodgrass, Bell, & Monroy, 2017). To follow a plan for DDDM, school administrators create effective data teams comprised of principals, academic coaches, and teachers (Schildkamp et al., 2019).

Researchers have conducted a number of studies that focused on DDDM in education to inform instruction. Reeves (2017) explored teachers' use of data to inform instruction by focusing on school-level differences in four categories of data use practices within the public school system. The theoretical framework of the study was built around the earlier works of Marsh (2012), and Mandinach and Gummer (2016), which characterized data use as a five-phase process (Reeves, 2017). The phases consisted of first identifying problems, the second phase requires using data, the third phase is transforming data into information, the fourth phase is transforming information into decision, and the final phase is evaluating outcomes (Reeves, 2017). The results of the

study found that using data for ordinary classroom instructional decision making and using data for programmatic instructional decision making was more likely to be used by elementary teachers than middle and high school teachers (Reeves, 2017). Researchers suggested that future research needs to take an in-depth look at the type of data (e.g., informal, classroom-based, or formal assessments) employed for teacher decision-making at different school levels (Reeves, 2017).

Abrams, Varier, and Jackson (2016) examined teachers' data use to align instructional practices with standards. The study's framework consisted of a theoretical framework which focused on Marsh's theory of action on the data use process (Abrams et al., 2016). The theory of action on the data-use process involved organizing and filtering data that becomes information; then this information is combined with teacher expertise to become actionable knowledge about students (Abrams et al., 2016). Once the information becomes actionable knowledge, then the knowledge is applied in the form of instructional practices to help students achieve desired outcomes (Abrams et al., 2016). Teachers who use DDDM in their planning are able to align instruction with the state curriculum and achieve the goal of improving student performance (Abrams et al., 2016).

Jung, McMaster, and DelMas (2017) found that a data-based instructional framework had a positive effect on students writing skills. Jung et al. (2017) suggested further research is needed to understand how teachers collect ongoing progress-monitoring data (informal assessments and formal assessments) and use those data to make instructional decisions based on students' responsiveness to intervention (Jung et al., 2017).

Faber, Glas, and Visscher (2017), Park and Datnow (2017), and van der Scheer, Glas, and Visscher (2017) focused on the relationship between DDDM and differentiated instruction in the classroom. Faber et al. (2017) found that when teachers use data to identify the need for differentiated instruction, student achievement was positively impacted. Park and Datnow suggested that when educators use various strategies and different types of data for decision making, they are able to successfully meet the needs of different types of learners. Further, van der Scheer et al. (2017) found DDDM has been used by teachers to make decision on which instructional strategies should be changed depending on the student's need.

Administrators and DDDM

Data is a tool that is used daily by administrators for making decisions for school communities (Meyers, Graybill, & Grogg, 2017; Vanlommel, Vanhoof, & Van Petegem, 2016). It is important for teams of administrators to build a DDDM culture that promotes data use in schools (Vanlommel et al., 2016). The quality of teachers' motivation to use data for DDDM, is influenced by administrators and is a key element in promoting data use in schools (Meyers, Graybill, & Grogg, 2017; Vanlommel, Vanhoof, & Van Petegem, 2016).

According to Hoppey, Black, and Mickelson (2018) school reform over the years involved stakeholders making decisions that impact "Teacher purpose, instructional capacity and DDDM practices" (p. 23). Hoppey et al. (2018) focused on the evolution of inclusive school reform in two elementary schools in a large metropolitan district. Key findings followed four themes that played important roles in school reform, as follows:

(1) unifying vision; (2) developing collaborative structures for inclusion; (3) implementing data informed practice; and (4) negotiating district and state constraints on inclusive practice (Hoppey et al., 2018).

Data teams play an important role and it is up to administrators to ensure that strong data teams are built within school communities to promote positive student achievement. Schildkamp, Poortman, Ebbeler, and Pieters (2019) explored how school leaders can build effective data teams. The researchers explored what types of leadership behaviors are applied to support data use in data teams (Schildkamp et al., 2019). The results of this study found five key building blocks for school leaders wanting to build effective data teams in their school, as follows: (1) establishing a vision, norms, and goal; (2) providing individualized support; (3) providing intellectual stimulation; (4) creating a climate for data use; and (5) networking to connect different parts of the school organization (Schildkamp et al., 2019).

Administrators assign academic coaches to create a climate for data use (Dunlap & Piro, 2016; Snodgrass, Bell, & Monroy, 2017). Creating a climate for data use was explored by Dunlap and Piro (2016), who focused on data literacy interventions provided by administrators. These researchers found that before intervention, teachers expressed a sense of discomfort with using data (Dunlap & Piro, 2016). However, after intervention, teachers' confidence levels were higher and they were more likely to use data for instructional purposes (Dunlap & Piro, 2016). Academic coaches were enlisted by administrators to assist teachers in their use of student data. Snodgrass, Bell, and Monroy (2017) examined how academic coaches in schools worked with science teachers around

data use. Their study was based on the assumption that teachers' use of students' assessment data follows a cycle, and that academic coaches play a role in supporting a cycle of inquiry and use (Snodgrass et al., 2017). The researchers suggested that coaches play diverse roles in supporting teachers, and that teachers' data use practices closely align with coaches' practices and preferences (Snodgrass et al., 2017).

Brown (2016) also investigated how important leadership support is to creating a DDDM environment. The study found the following principal supports are important for creating a DDDM environment, as follows: curriculum being aligned to the standards, data driven instruction efforts, development of common assessments, and creation of a schedule that allowed for uninterrupted instruction (Brown, 2016).

DDDM Impact on Student Achievement

The relationship between DDDM and student achievement has been explored by many researchers. Researchers have also identified a number of reasons why DDDM is used in education. Although there have been studies conducted on DDDM, how educators use students' assessment data has not been clarified. Over the years researchers have suggested future research needs to be conducted in the area understanding how educators (teachers, administrators, and academic coaches) use assessment data.

Reed (2015) explored the data-based decision making of 12 teachers in grades six through eight who were asked about their perceptions and use of three required interim measures of reading performance. The results of the study suggested the need for improved support for data-based decision making and the development of technically adequate interim measures with relevance to the teachers expected to use them (Reed,

2015). The researchers suggested that there is a need for future research to be conducted on DDDM in early childhood setting (Reed, 2015). Förster, Kawohl, and Souvignier (2018) also suggested that future research needs to be conducted on what data teachers use to inform and adapt instruction for students needs after conducting their study. Förster, Kawohl, and Souvignier (2018) conducted research on the effects of short- and long-term effects of providing teachers with data about students' diverse learning progress and the differentiated materials useful in adapting instruction to support student's in general education. Researchers found that teachers who used differentiated instruction based on students' assessment data are successful in improving their students' performance (Förster et al., 2018).

Park (2018) examined the data conversations and data decisions that were led by school leaders. The findings of the study highlight how data use for learning and equity requires leadership practices that focus on capacity building routines with facilitation (Park, 2018). Park (2018) also suggested that future research needs to be done that examines how leaders are leading data meetings and facilitating data-based decision making throughout the school.

Harvey and Ohle (2018) research focused on educator's perceptions and use of state-mandated Kindergarten entry assessment. The findings of the study suggested, policy makers should strive to ensure all stakeholders have a clear understanding of the purpose for a state-mandated KEA and that systems are in place to ensure reliability and validity of the data (Havey & Ohle, 2018). The results of the study suggested that researchers could examine teachers' practices with the implementation and use of other

mandated assessments data, whether at the state, district or school level (Harvey & Ohle, 2018).

Researchers have suggested that future research needs to be conducted on how teachers are using assessment data to drive instruction in the classroom as well as what assessment data is being used to make the decisions (Chizhik & Chizhik, 2018; Farrell & Marsh, 2016). The study conducted by Chizhik and Chizhik (2018) focused on exploring to what extent teachers lesson plans, and analysis of assessment data mediate their thinking about students' learning needs. The study found that assessment data that is aligned with cognitive skills can mediate teachers' planning of future instruction that supports development of identified cognitive skills. Although the study identified how assessment data can be used to improve cognitive skills there is still a need of understanding how teachers are using assessment data in their classroom to inform instructional practices.

Farrell and Marsh (2016) set out to compare an analysis that examined 245 cases of teachers' data use in five middle schools from a year-long study in the United States. The researchers found that teachers responded to data without any change in delivery in their instructional practice and a minority of cases where researchers saw teachers reflect on data and make changes to their instructional practice. Together, these findings paint a complex portrait of data use in schools (Farrell & Marsh, 2016). The study suggest that future work could explore the ways in which teachers use data to foster equity in classrooms, not only in learning outcomes but also the quality of instruction offered to students (Farrell & Marsh, 2016).

Although there have been studies conducted on administration and data use in schools, researchers suggested that there is still a need to understand data and leadership practices (Jingping, Johnson, & Przybylski, 2016). In a study conducted by Jingping, Johnson, and Przybylski (2016) the researchers set out to develop an incipient theoretical model to understand school leaders' practices in the effective use of data to lead schools. The research generated a framework for understanding the nature of principals' use of student data and resulted in a validated instrument to measure the status of such data use among North American school principals (Jingping et al., 2016). It has been suggested that future research can further test which data-driven school leadership practices are most effective in which particular areas of school decisions, and can examine the association between certain DDDM practices with key producers of student learning outcomes, such as school conditions and instruction (Jingping et al., 2016).

Sun, Przybylski, and Johnson (2016) conducted a research review which examined the nature, impacts, and shapers of teachers' use of student formative and/or summative assessment data to improve teaching and learning. The researchers found that seven types of data were identified indicating what teachers used to improve student learning (Sun et al., 2016). The researchers have suggested that for future research, researchers need to identify what specific areas do teachers use data for to improve student learning (Sun et al., 2016). Foster also suggests that future research needs to be conducted on how data is used to improve student performance and how it impacts instructional decisions.

Foster's (2019) purpose was to look into how grade-level teams of teachers are thinking about causes and strategies using student performance data. The study found that the observed teachers did not analyze student performance through the lens of instruction but rather were fairly quick to attribute the data to student characteristics or, in some cases, to a mismatch of student abilities to the type of assessment given (Foster, 2019). Jung, McMaster, Kunkel, Shin, and Stecker (2018) conducted a meta-analysis that examined the effects of teachers' use of Data-based Individualization, to improve academic performance for K-12 students with intensive learning needs, including those with disabilities. Findings of this study provided promising evidence of Data-based Individualization for improving student outcomes across reading, mathematics, and spelling/writing (Jung et al., 2018). The study suggests that future research set out to identify the ways that teachers intensify instruction within a DDDM framework (Jung et al., 2018).

Wachen, Harrison, and Cohen-Vogel, (2017) suggested that future studies need to be conducted on how educators in different areas (ECE setting) are using data in the classroom. The researchers examined how teachers described using data in their instructional practices (Wachen et al., 2017). The findings of the study revealed that few teachers were able to articulate an ability to bridge the divide between using data to identify students in need of help and using data to modify instruction (Wachen et al., 2017). The findings of the study led to the suggestion of future researchers focusing on educators' specific use of data in the classroom (Wachen et al., 2017).

Baas, Castelijns, Vermeulen, Martens, and Segers (2015) conducted a study that investigated the relation between assessment for learning and elementary school students' use of cognitive and metacognitive strategies. The researchers suggested future research could be used to identify how educators use assessment data for instructional best practices (Baas et al., 2015).

Abbott and Wren (2016) explored how middle school teachers' use locally developed performance task data to inform instruction and to ascertain how students are reflecting on their performance. Results from the study indicated teachers were engaged in formal data-informed practices and educators examined student work samples and planned instruction based on student-specific needs (Abbott & Wren, 2016). Abbott and Wren (2016) suggested that future research should explore other level schools and how performance data is used to drive instruction.

Im (2017) set out to understand how frequency of standardized testing is related to student learning and mediated by reading instruction. The study's framework was developed from the data use theory, which suggests that using data and making data-driven educational decisions are beneficial (Im, 2017). The results demonstrated (consistent with data use theory) that frequent implementation of standardized tests alone does not benefit children's learning, unless mediated by effective reading instruction (Im, 2017). The study suggested that there is need to understand the long-term impact of testing policy on child outcomes and how data-driven educational decisions (made by educators and administration) are made to impact student learning (Im, 2017).

Summary and Conclusions

It has been suggested by various researchers that DDDM improves student outcomes, as well as helps educators identify effective instructional practices (Abrams et al., 2016; Faber et al., 2017; Jung et al., 2017; Park & Datnow 2017; Reeves, 2017; Van der Scheer et al., 2017). Researchers have also indicated the importance of DDDM in schools as it relates to administrators. Researchers have identified that data impacts administrators' decision makings in the areas of instructional practices, curriculum frameworks, and school-wide educational decisions (Brown, 2016; Dunlap & Piro, 2016; Hoppey et al., 2018; Meyers et al., 2017; Schildkamp et al., 2019; Snodgrass et al., 2017). Despite findings from studies conducted on DDDM, researchers suggested further research needs to be conducted. Researchers suggested that future research focus on educators' use of assessment data, administrators' use of data, and data used in ECE settings (Chizhik & Chizhik, 2018; Farrell & Marsh, 2016; Förster et al., 2018; Harvey & Ohle, 2018; Park, 2018; Reed, 2015). Thus, the purpose of this qualitative study was to address a local need, as well as address a gap in the literature on practice by exploring how early childhood educators 'use students' assessments for DDDM to plan for instruction and design curriculum. In this chapter I provided the necessary background the necessary background DDDM and relevant research to contextualize the current study. In the following chapter, I provide details of the chosen design and methodology.

Chapter 3: Research Method

The purpose of this qualitative study was to explore how early childhood educators use students' assessments for DDDM to plan for instruction and design curriculum. In this chapter, I present the method that was used in the study. I first discuss the research design, rationale, and my role as the researcher. I then provide the methodological details that include instrumentation, procedures for participant recruitment and selection, data collection, and data analysis. The chapter closes with the strategies that I followed to ensure trustworthiness and ethical treatment of participants.

Research Design and Rationale

The central phenomenon of the study was to explore how educators are using students' assessments for DDDM to plan for instruction and design curriculum. Using the conceptual framework as a guide, I created the following two research questions:

RQ1: How do educators use assessments for DDDM to plan for instruction?

RQ2: How do educators use assessments for DDDM to design curriculum?

I followed a basic qualitative design with interviews to explore how educators use students' assessments for DDDM to plan for instruction and design curriculum.

The focus of my study was to develop an in-depth understanding of the research phenomenon through the perspectives of participants in their natural settings, which is why I selected a qualitative method. When deciding on a qualitative method I had to identify the appropriate qualitative design. There are five different qualitative design methods: grounded theory, narrative analysis, case study, phenomenology, and ethnography (Sauro, 2015). In narrative analysis, a researcher takes events from

individuals and writes a story that is cohesive (Sauro, 2015). The researcher conducts in-depth interviews, reads documents, and looks for themes (Sauro, 2015). This form of research is not appropriate because participants in this study included more than two individuals. The grounded theory qualitative design seeks to provide a theory or an explanation behind the events (Sauro, 2015). Interviews and existing documents are used to build a theory (Sauro, 2015). In order to identify themes and build a theory, the researcher must use open and axial coding techniques (Sauro, 2015). The sample sizes in grounded theory are also very large (Sauro, 2015). Grounded theory qualitative design will not be beneficial in my study because I am not setting out to identify a theory behind events. Case study research requires the researcher to provide an in-depth understanding of a study through multiple types of data sources (Sauro, 2015). Case study research requires the researcher to use multiple types of data sources to provide an in-depth understanding of a study (Sauro, 2015). Case studies can describe an event, investigate an event, or explain an event (Sauro, 2015). When the researcher immerses him or herself in the participants' environment for an extended period of time in order to understand goals, cultures, challenges, motivations, and themes, it is known as ethnography (Sauro, 2015). The researcher does not rely on interviews or surveys because they experience the environment in a first-hand manner (Sauro, 2015). Both case studies and ethnography methods would not be beneficial for two reasons: my study does not require me to immerse myself in the target participants' environment, and the study was not focused on one participant. Researchers use phenomenology to describe an event, activity, or phenomenon (Sauro, 2015). The researcher uses a combination of methods to understand

the meaning of whatever is being examined (Sauro, 2015). The researcher relies on participants' perspectives to provide meaning for what is being examined (Sauro, 2015). Since my study is not focused on a phenomenon, but rather focuses on how assessment data is being used to plan for instruction and design curriculum, a phenomenological study would not be beneficial.

After considering the various designs and looking at my research questions, I selected a basic qualitative design with interviews approach to the research topic. A basic qualitative design was followed to explore how educators use students' assessments for DDDM to plan for instruction and design curriculum. A basic qualitative study was considered a viable research paradigm because it is often used in the field of education. Lodico, Spaulding, and Voegtle (2010) suggested that a qualitative study could provide opportunities to learn directly from interviews with study participants. In this study, the results allowed me learn educators' views about what is important and which variables may be important for future research that focuses on education.

Role of the Researcher

In qualitative studies, the researcher's role is to act as an instrument that will process data (Tracy, 2013). In this study, I was the only researcher. My role in this study was that of an observer-as-participant. As a qualitative researcher, I collected data and conducted analysis of the data. The data collection process required me to follow appropriate protocols including obtaining organization and participant consent and ensuring each participants' confidentiality. On the consent form, I provided a brief description of the interview protocol. The researcher's role in qualitative studies is

critical and there is potential room for biases (Tracy, 2013). As a classroom teacher in the public school system, I took additional measures to prevent bias. One of these additional measures included maintaining a reflective journal to document my biases before gathering and analyzing data. According to Connelly (2016), to minimize bias, individuals should keep a reflective journal. My experience teaching in a public school, in particular a grade with high-stakes testing, led me to believe that DDDM is a necessity and should be conducted regularly to achieve desired student outcomes. However, using the journal help me minimize my preconceptions about DDDM.

Although I have previous experience with the topic of DDDM, I had no professional relationships with any of the participants or any affiliation with the schools where participants are employed. While analyzing data, I cross referenced my reflective journal to identify similarities. While conducting research, it is important to acknowledge any conflicts of interest, power differentials, or potentials for coercion. Participation was voluntary, and all volunteers were made aware of their rights to not participate, and that they had the opportunity to not continue participation at any point in the interview process. There were no threats of coercion.

Methodology

Data collection was accomplished through recruitment of 12 volunteers who gave their consent to participate in interviews. The participant population included principals (n = 2), third grade elementary teachers (n = 8), and academic coaches (n = 2). Qualitative interviews were appropriate for collecting information because this process allows participants to express their beliefs, behaviors, and experiences in their own way

(Jamshed, 2014). The study was conducted with early childhood educators in two rural elementary schools in one southeastern state in the United States. Responses from semi-structured interviews were digitally audio-recorded and transcribed by me. An analysis of the transcript was conducted using an open-coding method. The analysis included a search for codes and common themes to answer the research questions, which are guided by the framework for DDDM developed by Gill, Borden, and Hallgren (2014). A basic qualitative study with interviews was appropriate for this topic because findings from the study contribute to a greater understanding of educators' use of students' assessments for data-driven decision making in early childhood education. The following section presents the chosen methodology, participant selection, instrumentation, procedures for recruitment, trustworthiness, and ethical procedures.

Participant Selection

Purposeful sampling was used for participant selection. Purposeful sampling is a technique used in qualitative research. It involves identifying and selecting individuals or groups of individuals who are knowledgeable about or have experience with the phenomenon of interest (Palinka et al., 2015). After receiving district approval for recruitment, I sent out letters of cooperation to two principals from a rural area district to grant me permission to conduct research in their schools (see Appendix A). Once I received approval from the two principals to conduct research in their building, I also invited the two principals (see Appendix B), two academic coaches (see Appendix C) and eight third grade teachers (see Appendix D) from the two different schools in the rural area district to participate. According to Patton (2015), the choice of the participants and

the relationship of the study are important components that guide qualitative researchers to select an appropriate sample to align data. The Grade 3 teachers, principals as instructional leaders, and academic coaches all fall under the heading of "educators." These participants were the best to describe how students' assessments data are used for DDDM. The idea is that the richness of qualitative research is more related to the amount of detail and contextualization of data than to sample size (Patton, 2015). Patton's idea framed the way I collected data by interviewing a total of 12 participants (two principals, two academic coaches, and eight third grade teachers) to arrive at data saturation.

Instrumentation

Prior to data collection I had a panel of two experts review the interview protocol and research questions for early childhood principals, academic coaches, and teachers to establish validity. The panel included two professionals in the field of instructional support (DDDM and Administrative Support) and early childhood education. In order to conduct research, I had to first gain permission from the school district's Research, Assessments, and Grants department. When I obtained the permission from the Institutional Review Board (IRB) as well as the school district's department, I then sent invitations (per instructions from the school district) to ask Principals for permission to conduct researcher in their school.

Procedures for Recruitment, Participation, and Data Collection

Before beginning recruitment, I obtained approval from the IRB and the (Redacted) school district's Research, Assessments, and Grants Department. I contacted the principals of each school via email to seek letters of cooperation and their approvals

to recruit educators within their buildings for this study. I obtained letters of cooperation from both principals, which allowed me to recruit one academic coach and eight third grade teachers from their schools. The initial e-mail that contained the letter of cooperation sent to school leaders described that I had received district approval, the purpose of my research, and participation requirements. Principals were able to read the participation requirements for the volunteers, and then send me names of individuals who met the criteria of the study. The principals provided me with the academic coaches' and third grade teachers' names so that I could find their emails on the school's website.

After receiving names from the principals. I sent emailed invitations to those eligible participants. I also sent invitations to the principals who granted me approval to conduct research with their faculty (see Appendix B), along with sending invitations to the academic coaches (see Appendix C) whose names were provided to me by principals of the schools. Educators who met the criteria of being a third grade teacher with at least 3 years of ECE were also sent invitations (see Appendix D) via email. The recruitment email explained that I received approval from the district administrators and their principal to conduct research within the school. The recruitment email also described the purpose of my study, confidentiality, participation, and the interview process. All participants who were interested in the study contacted me via email to let me know of their interest and ask any questions. All participants who agreed to be in the study sent a response back to me via email with the statement, "I consent."

All interviews were conducted face-to-face via video conferencing and were digitally audio recorded. The interviews were conducted in my private office and in a

private area in the participant's home. Each interview lasted 20-30 minutes. In alignment with the interview protocol, I started the interview by introducing myself and thanking the participant for volunteering. I then explained that from the next point on I would be digitally audio recording the interview and asked for their permission. I explained to the participant their participation is voluntary, and reviewed the ethical background, confidentiality, interview procedures, and information concerning transcribing the interviews. I ended the interview by thanking the participant for participating. The 12 interviews included two principals (one interview per principal), two academic coaches (one interview per academic coach), and eight third grade teachers (one interview per teacher). All the participant interviews followed the same protocol. After each interview, I transcribed the interview within 24 hours by using the digital audio recording. I also used the interview transcript and summarized the participant's responses. The participant's summary was then sent to him/her via email for member checking. I asked the participant to review the summary and verify that I accurately captured his/her responses, and to provide me with clarifying points as he/she felt was appropriate. All data were organized by alphanumeric coding. At the end of the data collection process, I sent an email out to each participant thanking them for contributing to the study. I made them aware that upon completion of the study I would share findings of the study with them via email that will include a one page summary of the study.

The data came from interview responses from two different schools in the district. Following purposeful sampling, I selected stakeholders within the school who would have knowledge about DDDM so that I could understand how DDDM is used from

different stakeholders in ECE (Palinkas et al., 2015). Interviews were the primary approach for collecting data for the study. Interviews allow participants to express their beliefs and experiences in their own ways (see Jamshed, 2014). Conducting face-to-face digitally recorded interviews via video conferencing allowed me opportunities to have direct contact with participants that enhanced my ability as a researcher to more readily comprehend interviewees' responses benefitted by viewing their facial expressions and gestures.

Data Analysis Plan

Responses from semi-structured interviews were digitally audio-recorded and transcribed by me. Upon completion of interviews with the participants and transcribing the responses, I coded them. An analysis of the transcript was conducted using an open-coding method. The analysis included a search for codes and common themes to answer the research questions, which are guided by the framework for DDDM developed by Gill, Borden, and Hallgren (2014). Open-coding refers to the initial phase of the coding process in qualitative research (Gallicano, 2017). I followed Gallicano's (2017) process of open-coding requires the researcher to follow four steps, as follows: (1) read through the data several times, (2) create tentative labels for chunks of data that summarize what is happening (not based on existing theory), (3) record examples of the participants' words, and (4) establish properties for each code. Coding the transcribed interviews reduced the data to a manageable size for reporting.

Trustworthiness

According to Connelly (2016), trustworthiness refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of a study. It is important that researchers establish protocols and procedures necessary for a study to be considered worthy of consideration by readers (Connelly, 2016). The criteria that constitute trustworthiness include credibility, dependability, confirmability and transferability (Connelly, 2016). Credibility of the study or the truth of the study and the findings is the most important criteria (Connelly, 2016). Techniques that establish credibility include a prolonged period of engagement with participants that allow for multiple observations that are captured in journaling and checked frequently through debriefing and member-checking with peers(Connelly, 2016). In order to ensure credibility of the data, I was mindful of how my behaviors may influence participants. In order to prevent personal biases from influencing my data in any way, I used reflective journaling as well as member checking. Member checking requires the researcher to ask participants to review a copy of an interview transcript to ensure accuracy (Simpson & Quigley, 2016). By member checking I was able to ensure the credibility of study data by employing member checking to guarantee my interpretations of study data are reflective of the ideas and thoughts that participants intended to covey. Participants were allowed to review summaries of their transcripts and I gained feedback from each participant to ensure I correctly captured data from their interviews.

Dependability refers to the stability of the data over the conditions of the study and over time (Connelly, 2016). Stability of conditions depends on the nature of the study

(Connelly, 2016). In order to establish dependability I used detailed documentation and an audit trial that consisted of an analysis of procedures and documentation of data collection. Additionally, in order to avoid biases or misinterpretation of the data, I used an interview protocol (See Appendix A). Transferability refers to the degree to which the results can be generalized or transferred to other contexts or settings (Connelly, 2016). According to Connelly (2016), researchers support the study's transferability with detailed and rich description of the context location, people studied, location, and by being transparent about trustworthiness and analysis. As recommended by Connelly (2016), I established transferability of study data through detailed description and using purposeful sampling. I described the setting, participants, data collection, analysis and findings that are related to the study. I paid attention to the sample size by selecting participants from the population of research interest, which consisted of early childhood educators in two rural elementary schools in one Southeastern state in the United States. I also used Gill, Borden, and Hallgren conceptual framework to construct the interview questions to ensure they aligned with the research questions for this qualitative study. Therefore, the study is relatively valid or dependable for use within the school district.

The final criterion for trustworthiness is confirmability. Confirmability refers to the degree to which the study's results could be corroborated or confirmed by others (Connelly, 2016). As mentioned previously in this chapter to establish confirmability I used a reflective journal and an audit trial. Maintaining a research journal allowed me to reflect on my beliefs about DDDM in early childhood education which may have developed as a result of my experiences as a public school teacher. The reflection

strategy helped me identify the need to minimize my own thoughts regarding DDDM as I interacted with participants in the data collection stage.

Ethical Procedures

In order to ensure that a code of ethics is followed there are a number of steps I will take. To ensure the ethical treatment of all participants, I had to obtain Institutional Review Board (IRB) approval from Walden University for this study before I begin recruitment. I also had to obtain approval from the school district's "Research, Assessments, and Grants" department to conduct research at the two rural schools. Once I received approval from both the IRB and district I had to obtain approval from the two principals of the schools where I conducted researcher. I secured a letter of cooperation from each school's principal which would allow me to recruit volunteers from the school. I recruited volunteers only from the list of names that each principal supplied me with via email. The email included details of the study, permission from district and principal, and study procedure (See Appendix B). I also made sure to include in the e-mail that participation is completely voluntary and they have the right to withdraw at any time. I made sure to inform the participants that the identities of all participants and their organizations will remain confidential. Participants were also able to ask any questions before the interview began.

I followed the Basic Ethical Principals outlined in the Belmont Report (U.S. Department of Health and Human Services, 1979). The principles outlined in the Belmont Report include respect, justice, and beneficence (U.S. Department of Health and Human Services, 1979). My research plan was designed to minimize risk to participants.

In regards to confidentiality, all participants' names were given alpha-numeric coding. Principals were given the alpha-numeric code of P1 and P2. Academic coaches were given the codes C1 and C2. Teachers were given the alpha-numeric codes of T1, T2,...T8. Educators 'alpha-numeric codes were used in data analysis and presentation.

I am the only one with access to the raw data collected from the participants. I was also the only one to transcribe interviews and electronic data. The interview transcripts and electronic data are stored on my personal password-protected computer. My handwritten notes and my reflective journal are stored in a locked file cabinet located in my home office to which only I have access. I will be sure to retain all study-related data for the required five-year period set by Walden University. Once I have held that data for the required period I will take all data to a professional company (I will hire) to destroy all study data. There were no incentives given to individual participants or organizations. I also had no personal or professional connection to any of the participants. Thus, there were no threats of coercion or conflicts of interests related to study participation.

Summary

At the beginning of this chapter, I presented the purpose of the study and the problems that motivated the purpose. I also presented the chosen methodology to conduct the study, a rationale to justify my chosen approach, and my role as researcher. Participation recruitment and selection were also presented in this chapter. A data analysis plan and instrumentation were included in this chapter. Further, I explained trustworthiness of the study and criteria followed to ensure trustworthiness was met.

Lastly, ethical considerations for participants' involvement were presented in this section to reinforce the validity and reliability of the research. Findings resulting from analysis and interpretation of data collected in this basic qualitative study with interviews will be reported in Chapter 4.

Chapter 4: Results

The purpose of this study was to explore how early childhood principals, academic coaches, and teachers use students' assessments for DDDM to plan for instruction and design curriculum. Exploring how principals, academic coaches, and teachers use student assessments for DDDM to design curriculum and plan for instruction will contribute to understanding at the local level and close the gap in the literature on practice. The two research questions addressed by this basic qualitative study were as follows:

RQ1: How do educators use assessments for DDDM to plan for instruction?

RQ2: How do educators use assessments for DDDM to design curriculum?

Chapter 4 focuses on the findings of this study. I describe the setting, data collection and analysis processes, summary of results, and evidence of trustworthiness.

Setting

Twelve early childhood educators (two principals, two academic coaches, and eight teachers) from two rural schools located in the Southeastern U.S. participated in the study. Following IRB approval from both Walden University and the school district that was the setting of the study, letters of cooperation were sent to the district administrator to seek permission to contact campus level administrators. Having gained permission from the district and campus administrative levels, both principals identified educators (academic coaches and teachers) who met criteria for participation in the study of having three or more years of experience working with DDDM (see Appendix A) as grade 3 teachers, academic coaches, and/or principals. As part of the recruitment process,

eligible principals, academic coaches, and teachers received an invitation letter via e-mail asking them to volunteer for the study, ask any questions that they may have, and, if they understood the study and wanted to participate, to indicate by writing "I consent." Volunteers gave their informed consent to participate in the study via e-mail as approved by the Walden University IRB. Contents of the letters included the purpose of the study and a request for voluntary participation.

Demographics

Purposeful sampling was used in this study, which required drawing samples among principals, academic coaches, and teachers who met specific criteria. For this study, participants had to be early childhood principals, academic coaches, and teachers for a minimum of 3 years, including during the time of this study. Limitations to purposeful sampling could lead to the inability to generate findings across the setting (Palinkas et al., 2015). Although it would have been ideal to interview the total population in ECE on each campus, the strategy was not necessary in qualitative interviews (Lodico et al., 2010). Table 2 shows the demographic profiles regarding sex and years of experience for the 12 participants. Participants were given alphanumeric codes to conceal their identities for reasons of confidentiality. The alpha-numeric codes fulfilled the promise of anonymity, where P = principal, C = academic coach, and T = teacher.

Table 2

Research Participants' Demographic Profiles

Participants	Gender	Years of experience
Principal		
P1	Male	19
P2	Male	22
Academic coach		
C1	Female	22
C2	Female	22
Teacher		
T1	Female	29
T2	Female	14
T3	Female	6
T4	Female	7
T5	Female	18
T6	Female	30
T7	Female	3
T8	Female	6

Data Collection

The recruitment and data collection processes took 2 months to complete and took place during the COVID-19 pandemic. Further, the recruitment and data collection procedures in the district took place after completing the district's IRB process, which included gaining permission from district administrators to gain access to building principals. With permission at the district level, I was able to contact building principals and gain their cooperation, recruit volunteers for the study, request informed consent and invite participants, and organize and conduct the interview process.

Procedure for Access to Volunteers

Once I completed and received IRB approval from Walden University (07-02-20-0739607) to conduct my study, and also completed and received IRB approval from the

school district, I proceeded with the required process (per the school districts' regulations). I provided each principal with a letter of cooperation to conduct research within his/her school. The letter of cooperation was sent via email and informed the principals that I had received approval from the district administrator to conduct research to explore how third grade teachers use DDDM to plan for instruction and design curriculum. The letter also provided the purpose of the study, the positions and numbers of volunteers needed for the study, the participants' ECE experiences required, and a request for names of qualified individuals to recruit for the study. Once I received a response back from each principal agreeing to allow me to conduct research and providing names for qualified individuals, I sent out recruitment invitations via email to participants using the names that were provided to me. The recruitment invitations provided the purpose of study, confidentiality information, interview process, my contact information for questions, and an attached informed consent form. I informed volunteers that if they understood the study and agreed to participate, they could reply back to the recruitment email with the words, "I consent," on their personal e-mail. Volunteers were assured that their correspondence would remain confidential and be protected on my password-protected laptop that only I have access to. The first 12 volunteers who responded to my invitation were selected. I interviewed 12 participants, which included two principals, two academic coaches, and eight third grade teachers.

Interview Process

Once I received an email from participants agreeing to volunteer for the study, I contacted each participant to set up a day and time for the interview. I called on video

conferencing during one of three times each provided to me while stating that they would be available to participate in an interview during any of the times listed. All interviews with participants were conducted through their preferred video conferencing systems. To ensure confidentiality, I reminded participants to select an area for the interview where they would have privacy. I conducted and digitally audio recorded all interviews in my home office where I am the only individual who has access. Each interview lasted between 20-30 minutes.

At the beginning of each interview, I introduced myself to each participant along with thanking them for agreeing to be interviewed. Afterwards I explained the purpose of the study. I then explained that the interview would be recorded and asked each participant's permission. Once each participant agreed, I suggested the expected time for the interview and reminded volunteers that their participation was voluntary. I reviewed the ethical background and information concerning the interview. I then proceeded to remind each participant about confidentiality and that they had the right to stop the interview process at any time without consequence. The sequence of the introduction and the format of how I presented the information was the same for each participant. The format and the sequence came from the interview protocol (see Appendix F), which I created to ensure I maintained the sequence of the questions.

During the interview, I also used a digital audio recording device to capture participant's responses. I asked each principal and academic coach three background questions and five open-ended questions (see Appendix). Each teacher was asked three background questions and six open-ended questions (see Appendix). After each

interview, I watched and listened to the video recording. I also listened to the digital audio recording several times and took notes in my journal using participants' alphanumeric codes to organize the data. I transcribed participants' responses to accurately capture their words. After completing each transcription, I summarized the data for each participant. Each participant received a summary of their transcription for member checking.

Data Analysis

In this section, I describe the data analysis processes. Also included are findings, validity, ethical considerations, and criteria for trustworthiness. All data were obtained from semi-structured interviews. Data obtained from each of the 12 participants were organized by alphanumeric coding. I recorded and transcribed all data. Data analysis software was not used. I analyzed data by following Gallicano's (2017) four step process of open-coding. Steps followed for this process included the following: (1) read through the data several times, (2) create tentative labels for chunks of data that summarize what is happening (not based on existing theory), (3) record examples of the participants' own words to identify codes, and (4) identify themes based on the identified codes.

The first step required me to read through each transcribed document several times. The second step involved rereading through each transcribed document and listening to audio recordings as needed. I began creating tentative labels for the chunks of data that summarized the participants' responses to interview questions. For the third step, I wrote down words, phrases, and sentences that were quotes from participants. I organized these by alphanumeric codes. To complete this step, I identified key responses

that were common to participants. The fourth step required me to categorize the codes to identify themes found in participants' responses.

During the initial coding process, I read the transcribed documents and selected meaningful statements. After the initial coding process was completed, I worked on validating codes, which yielded 38 codes (see Appendix G). I aligned the codes and analyzed data to identify similarities and commonalities in the participants' responses. The process allowed me to identify 20 distinct codes. I then looked at the 20 distinct codes to review the codes for accuracy and then reduced those initial codes to 10 refined codes.

A category is a grouping of information that consists of happenings and events that form concepts (Williams & Moser, 2019). In order to create categories I had to group refined codes into categories. After an in-depth analysis, I was able to come up with three categories by clustering the codes based on their commonalities by stages during which two principals, two academic coaches, and eight teachers used student assessment data for DDDM to plan for instruction and design curriculum. In order to develop a theme, the researcher must summarize each code to find underling patterns and meanings (Williams & Moser, 2019). To develop themes, I examined categories for alignment. After identifying categories, themes emerged, which allowed me to formulate explanations. Once I formulated the themes into statements, I was able to link participants' summary statements to succinctly answer each research question.

In answering RQ1, participants indicated that they use assessments for DDDM to plan for instruction in five different ways. The following information is a synthesis of the

data from participants that revealed how they used DDDM to plan for instruction based on student assessments: (1) collaborating with academic coaches, grade-level team members, and administrators, (2) focusing on plans for differentiated instructional practices and curriculum design for extension and/or remediation based on individual assessment data, (3) selecting informal, formal, formative, summative, and diagnostic holistic assessments to identify students' demonstrated knowledge, skills, and dispositions and learning gaps, (4) analyzing desegregated and segregated data for evidence of effective individualized differentiated instructional practices and curriculum that led to student mastery, and (5) monitoring assessment data by involving students as team members within the DDDM system for continuous progress monitoring.

In answering RQ2, participants indicated that they used assessments for DDDM to design curriculum in a systematic manner. From the codes, I recognized categories, which participants suggested involved three stages within which DDDM took place. These are as follows: (1) preliminary activities that are engaged in to analyze data from several sources and develop an instructional framework for the academic year, (2) continuous activities that are on-going or continuous and engage data teams comprised of principals, academic coaches, and teachers, and (3) culminating activities that analyze data at the end of the academic year for future planning. Participants used assessment data for DDDM for curriculum design as preliminary activities (before) in the following ways: (1) comparing national, state, and district student data by grade level bands to determine strengths and areas for growth, (2) accessing results of data collected from students' summative assessments, teachers' anecdotal records, and family's/parents'

surveys from previous year, and (3) creating a campus-wide framework for curriculum alignment by grade level with pacing guides for meeting instructional targets for student mastery. Participants use assessment data to design curriculum in the following continuous ways: (1) collaborating with academic coaches, grade-level team members, and administrators. Participants use assessment data to design curriculum at the end of the year in the following way: (1) reviewing current and new curricular materials and resources with stakeholder groups for cultural and linguistic appropriateness, relevance, and alignment to standards; and (2) summarizing quantitative and qualitative data from students' assessments for DDDM about classroom curriculum materials to determine effectiveness in meeting goals for future planning. Summary found in Table 3.

Table 3

Summary of Themes

Research Questions	Key Findings
RQ1: How do early childhood educators (i.e., principals, academic coaches, and teachers) use assessments for data-driven decision making to plan instruction?	Early childhood principals, academic coaches, and teachers use students' assessment data to plan for instruction in a continuous manner throughout the school year. Educators engage in the following ways: collaborating, selecting, analyzing, focusing, and monitoring.
RQ2: How do early childhood educators (i.e., principals, academic coaches, and teachers) use assessments for data-driven decision making to design curriculum?	Early childhood principals, academic coaches, and teachers use assessment data to design curriculum by engaging in preliminary, continuous, and culminating activities. Educators use student assessment data to make decisions on curriculum design by collaborating, reviewing, comparing analyzing, and creating.

Results

This study explored how early childhood principals, academic coaches, and teachers used students' assessments for DDDM to plan for instruction and design curriculum. As a qualitative researcher, I analyzed the data using open-coding method. The findings of this study focused on the main themes that were identified as they related to how educators used student assessment data for instructional planning and curriculum design. Data collected allowed me to answer both research questions. The collected data also allowed me complete analyses of data, identify findings based on data analyses, and provide recommendations for further research about this topic.

Results: Research Question 1

This section presents findings for RQ1: How do early childhood principals, academic coaches and teachers use assessments for DDDM to plan for instruction?

The 2 principals, 2 academic coaches, and 8 teachers serving early childhood students in Grade 3 in two rural schools gave me descriptive responses when answering interview questions. Based on their responses, all principals, academic coaches and teachers understood each question during the interview process. While reviewing participants' responses to RQ1, I listened to the digitally audio recorded responses repeatedly and reread the transcripts several times. As a result of coding and analysis of RQ1, five themes related to DDDM and instructional planning emerged, as follows: (1) collaborating between academic coaches, grade-level team members, and administrators, (2) focusing on plans for differentiated instructional practices and curriculum design for extension and/or remediation based on individual assessment data, (3) selecting informal,

formal, formative, summative, and diagnostic holistic assessments to identify students' demonstrated knowledge, skills, and dispositions and learning gaps, (4) analyzing desegregated and segregated data for evidence of effective individualized differentiated instructional practices and curriculum that led to student mastery, and (5) monitoring student data for continuous progress of students. These themes will be presented in an abbreviated form under each group of educators along with relevant quotes from participants.

Principals. The principals expressed similar responses concerning how they use student assessment data to plan for instruction for DDDM. Both principals expressed that they work to establish a climate for DDDM, collaborate with data teams, identify focused instructional needs, select appropriate assessments, participate in analysis of data, and monitor students' assessment data.

Collaborating. The principals expressed similar responses about collaborating with other administrators, academic coaches and teachers to use DDDM to plan for instruction. While giving their responses, the principals shared that they meet with coaches, administrators, and teachers to collaborate on planning for instruction and designing curriculum. The principals expressed they work together with all principals in the district to ensure they are using the analyzed student assessment data in a manner that helped them create effective instructional plans. Principals determined efficiency of the process by viewing student assessment data to measure student mastery of academic targets.

Participant P1 noted, “Weekly data meetings occur [between academic coaches] to discuss curriculum design and instructional practices.” Participant P1 continued to discuss the topic and said, “Individual sessions occur with teachers two times a week to discuss data and create plans. Academic coaches meet weekly with administration to discuss overall data within the school.” Participant P2 noted, “Collaborative meetings occur with academic coaches first then teachers weekly to discuss student assessment data within the building and the classroom.” Participant P2 continued to discuss the topic and said, “We work together in the collaborative meetings to create plans that will ultimately help our students succeed.”

Focusing Instruction. Focusing instruction involves principals, academic coaches, and teachers choosing to work on addressing the learning challenges and strengths of students. Principals in this study highlighted the importance of analyzing data in DDDM team meetings to help identify areas that need to be worked on throughout the school year. The principals expressed that they use previous school year data to help identify strengths and challenges of students. Each principal explained that he meets with teachers in his building to assist them with identifying areas of focus to help solidify instructional plans. P2 stated, “Assessment data is needed to show growth, and recognition of student needs.” P2 continued on this topic and stated, “The focus in the building is instructional strategies, and to understand if students have grasped concepts. In order to do this assessment data is used to identify areas of focus.” P1 noted, “Data points are used to ensure student understanding, inform instructional strategies, and check

for remediation." P1 continued, "Data points allow us to identify the areas we need to target in our school as a team to ensure student mastery."

Selecting Assessments. DDDM requires educators to look at data and make decisions that will improve student achievement. During the interview the principals explained that they used a variety of assessments' (diagnostic, formative and summative) data to identify students' demonstrated knowledge, skills, dispositions and learning gaps. The principals expressed the importance of both the summative and formative assessments to identify student knowledge and learning gaps. The principals also noted diagnostic assessments data as well were used to identify student skills, disposition, and knowledge. Participant P2 stated, "Formative assessments are used to identify the building needs such as overall strengths and weaknesses of the students." Participant P1 stated, "There are a variety of assessments that are used (formative, summative, and diagnostic) to make decisions about the instructional plan."

Analyzing Data. In the study, principals discussed the importance of analyzing data in DDDM. Analyzing data requires individuals to review data to identify useful information and support decision-making. P2 stated, "The data is separated in a quantitative manner for me to review." P2 continued, "The numbers are viewed to identify the gaps in the curriculum as well as help identify specific instructional needs."

Monitoring Progress. Progress monitoring is used to assess students' academic performance. The principals expressed the importance of progress monitoring to ensure that the teachers create instructional plans that will continue to allow the student to grow academically. Both principals expressed that progress monitoring occurs consistently

throughout the school. P2 stated, “Assessment data is used bi-weekly to monitor student’s academic performance.” P1 also expressed, “Weekly data meetings (review of student assessment data) occur to discuss instructional practices.”

Academic Coaches. The academic coaches expressed similar responses to the principals concerning how they use student assessment data to plan for instruction for DDDM. There responses were aligned with the principals within their school. Both academic coaches expressed that they collaborate, identify focused instructional needs, selecting the appropriate assessments, analyze data, and monitor student assessment data to plan for instruction.

Collaborating. The academic expressed similar responses about collaborating with other administrators and teachers to use DDDM to plan for instruction. While giving their responses, the academic shared that they meet with principals and teachers to collaborate on instructional plans. The academic coaches expressed they work together with principals and teachers to ensure they are using the analyzed student assessment data in a manner that will help them create effective instructional plans. Participant C1 expressed those collaborative meetings “Are used to determine the next steps [teachers should take] when planning for instruction. Participant C1 continued to say “After data meetings we provide the teachers with feedback to assist in any areas [instructional areas] they made need assistance.” Participant C2 stated “Weekly data meetings occur [with principals and teachers] to collaborate on instructional plans.”

Focusing Instruction. As mentioned in the previous section focused instruction is an area of focus where educators (principals, academic coaches, and teachers) choose to

work on during their instructional practice based on the learning challenges and strengths of students. The academic coaches in the study expressed the importance of analyzing data in DDDM to help identify areas that need to be worked on throughout the school year. The academic coaches expressed that they use student assessment data to help identify strengths and challenges of students. Each academic coach explained that they meet with teachers to assist them with identifying the areas of focus to help create instructional plans. Participant C2 stated, "We look at the teacher assessments and other student assessments [summative and formative] to identify the instructional needs for the school building." Participant C1 also expressed, "Formative and summative assessments are used to identify needs of students." Participant C1 continued with this topic and stated, "Once we [academic coaches] analyze the data we are able to identify the areas where teachers need to focus on for instruction."

Selecting Assessments. DDDM requires educators to look at data and make decisions that will improve student achievement. During the interview the academic coaches explained that they used a variety of assessments' (diagnostic, formative and summative) data to identify students' demonstrated knowledge, skills, dispositions and learning gaps. The academic coaches expressed the importance of using a variety of student assessment data to identify student knowledge and learning gaps. Participant C1 noted "We [academic coaches] use a number of items while reviewing the data which include both formative and summative assessments." Participant C2 stated "It is important that we look at the summative assessment data monthly to help identify student knowledge and needs." Participant C2 continued with the topic and stated, "As an

academic coach I try to use a variety of assessments to help the teachers meet the needs of students."

Analyzing Data. In the study the academic coaches (like the principals) discussed the importance of analyzing data in DDDM. Analyzing data requires individuals to review data to identify useful information and support decision-making. The academic coaches suggested that before sharing data with principals it is their job to first analyze the data. C2 stated, "As an academic coach it is my job to first analyze the data and identify any patterns or significant information found in the data." C2 continued on this topic and stated, "Once I have completed my analysis then I present my findings to our school principal, to create an instructional plan to present to teachers." C1 stated, "Assessments (formative and summative) are an essential piece in the analysis of data." C1 continued, "There should be multi forms of assessments utilized, and it should be done on a consistent basis to create instructional plans.**"**

Monitoring Progress. Progress monitoring is used to assess students' academic performance. The academic coaches expressed the importance of progress monitoring to ensure that the teachers create instructional plans that will continue to allow the student to grow academically. Both academic coaches expressed that progress monitoring occurs consistently throughout the school. C1 stated, "Assessment data is monitored continuously within the school." C1 continued with the topic and stated. "We [academic coaches] have weekly meetings with teachers, monthly meetings with the principal, and quarterly meetings with district stakeholders about academic progress." C2 stated, "An

analysis of formative and summative assessments is conducted regularly to provide us with information about what the student truly knows or understands."

Teachers. The teachers expressed similar responses concerning how they use student assessment data to plan for instruction for DDDM. The educators (teachers) expressed that they collaborate, identify focused instructional needs, selecting the appropriate assessments, analyze data, and monitor student assessment data to plan for instruction.

Collaborating. The teachers expressed similar responses about collaborating with other administrators, academic coaches and teachers to use DDDM to plan for instruction. While giving their responses teachers shared that they meet with coaches, administrators, and teachers (from the same grade level) to collaborate on instructional plans. The teachers expressed they work together to ensure they are using the analyzed student assessment data in a manner that helped them create effective (educators determine efficiency by viewing student assessment data to measure student mastery) instructional plans.

Participant T2 said, "Data meetings are held, in the school with the academic coach and the Assistant Principal for our grade level." T2 continued on the topic and stated "During this meeting we work together so that we can create an instructional plan." Participant T7 stated, "Within my school both data meetings are used regularly, segregating data is a process to use uniformed resources and instructional practices to ensure students in identified learning groups receive similar instructional practices to achieve overall student success." Participant T1 noted, "We have weekly data meetings

with our administration team [grade level principals and academic coach] to work on creating instructional plans. Participant T4 stated "We [third grade teachers] look at data as an entire 3rd grade team and create a plan." Participant T5 noted, "We [third grade teachers] met officially on Wednesday to discuss data with our administrative team [grade level administrator and academic coaches], to look at student assessment data to guide lesson planning."

Focusing Instruction. Focused instruction is an area of focus where teachers and academic coaches choose to work on during their instructional practice based on the learning challenges and strengths of students. All teachers in the study expressed the importance of analyzing data in DDDM to help identify areas that need to be the focus for instructional time and the kind of curriculum they need for their students. Each teacher explained that they meet with grade level teams made up of teachers and academic coaches to assist them with identifying the areas of focus to help create instructional plans and identify curriculum. Based on the responses of the educators, focused instruction played a vital role in student achievement. Representative comments from participants follow in the section below.

Participant T5 stated, "It [identifying specific areas to focus instructional time] helps me identify students who needed support during our Morning Focused Instruction block and exactly which skills they needed help with." Participant T4 had a similar response by stating, "Analyzing student data allows me to plan my instruction around each student's specific needs, strengths and weaknesses as opposed to generally teaching each student in the same manner." Participant T1 expressed the importance of

interpreting the student data to make decisions. Participant T1 stated “Interpreting data does give me the benefit of identifying the strengths and weaknesses of my students and from that I can form and develop meaningful lessons.” Participant T3 noted, “Assessment data helps me identify if I need to spiral back to what they missed previously.” Participant T6 stated, “I feel it sets the foundation/pathway for planning and managing instruction for whole group, small group or individualized instruction.”

Selecting Assessments. DDDM requires educators to look at data and make decisions that will improve student achievement. During the interview participants (teachers) explained that they used a variety of assessments’ (informal, formal, formative, summative, and diagnostic) data to identify students’ demonstrated knowledge, skills, dispositions and learning gaps. The educators expressed the need to look at informal assessment data daily to guide their instruction. The educators also expressed the importance of both the formal and formative assessments to identify student knowledge and learning gaps. Summative assessments and diagnostic assessments data were used to identify student skills, disposition, and knowledge.

Participant T7 emphasized the importance of using a variety of assessments throughout the year to plan for instruction. Participant T7 stated, “I use them prior, during, and after lesson assessment data to help drive the plan for instruction. I use pre-assessments and standardized assessment data to determine the prior knowledge and ready to start, reading and learning levels to make groups and meet the student’s needs and strengths.” Participant T7 continued the topic by saying, “Throughout the lesson, I use formative assessments as check points to review data and gauge the student’s

conceptual knowledge and adjust the instruction as needed. The summative assessments and assessments after a completed lesson are used to identify the need of remediation of the skill, and readiness for the next lesson." Participate T5 stated, "On a daily basis I use anecdotal notes , daily assignments, and student observation to plan instruction (which students need review, which need extensions)." T5 continued with this topic and stated, "On a monthly plus basis, I use end of unit tests to identify students who may need more support. Participant T6 noted, "DDDM is key in helping me plan targeted instruction for each of my students." T6 continued, "I use informal and formal assessments to plan for the following week."

Analyzing Data. Analyzing data was noted as an important process in DDDM. Based on the participants' responses they analyze both desegregated and segregated data for evidence of effective (in order to identify efficiency of practices educators look at student mastery) individualized differentiated instructional practices that led to student mastery. Interviews reflected the educators perspective that desegregated and segregated data allows them to identify if instructional practices were effective and if students mastered the content.

Participant T7 stated, "Within my school both data meetings are used regularly, segregating data is a process to use uniformed resources and instructional practices to ensure students in identified learning groups receive similar instructional practices to achieve overall student success." Participant T2 stated, "Segregating data is also done, amongst the team to review the strengths and weaknesses of the entire grade level and individual class."

Monitoring Progress. Progress monitoring is used to assess students' academic performance. The teachers expressed the importance of progress monitoring to ensure that instructional plans created will continue to allow the student to grow academically. Participant T7 also expressed, "In addition, I regularly monitor progress by using informal data, such as pre-assessments, formative assessments (ticket out the door, popcorn, think-pair-share, etc.) to evaluate the student's needs, strengths, and mastery throughout lesson to make adjustments to instruction as necessary to meet the student's needs." Participant T3 noted, "I use a lot of informal assessments to make the day to day decisions in instruction." Participant T4 stated, "I use assessments for DDDM to plan my instruction on a weekly basis." Participant T4 continued on this topic and stated, "I analyze the formal and informal data from the past week's assessments to effectively plan for the activities, groups, and content of the next week's lessons."

Results: Research Question 2

In this section, I present the results for RQ2: How do early childhood principals, academic coaches, and teachers use assessments for DDDM to design curriculum? The majority of educators understood the question; however, there were discrepancies in information during the interview process based on lack of specificity in participants' answers to the question of how. During the are as follows: (1) preliminary activities that are engaged in to analyze data from several sources and develop an instructional framework for the academic year, (2) continuous activities that are on-going or continuous and engage data teams comprised of principals, academic coaches, and teachers, and (3) culminating activities that analyze data at the end of the academic year

for future planning. For RQ2, five sub themes were identified, as follows: (1) comparing national, state, and district student data by grade level bands to determine strengths and areas for growth, (2) accessing results of data collected from students' summative assessments, teachers' anecdotal records, and family's/parents' surveys from previous year, (3) creating a campus-wide framework for curriculum alignment by grade level with pacing guides for meeting instructional targets for student mastery, (4) collaborating with academic coaches, grade-level team members, and administrators, and (5) reviewing current and new curricular materials and resources with stakeholder groups for cultural and linguistic appropriateness, relevance, and alignment to standards. After reviewing the themes, I identified that educators plan curriculum in a systematic manner by stages as preliminary, continuous, and culminating activities. I placed the five subthemes from RQ2 into the categories of "preliminary activities," "continuous activities," and "culminating activities." In this section I will present the categories and the themes that are aligned.

Preliminary Activities

There are a number of preliminary activities that occur at the beginning of the school year as a group. Both principals, both academic coaches, and all teachers noted that they complete the following activities at the beginning of the year as a team. The following themes are from data revealed through RQ2, which fall under the preliminary activities for curriculum design: (1) comparing national, state, and district student data by grade level bands to determine strengths and areas for growth, (2) accessing results of data collected from students' summative assessments, teachers' anecdotal records, and

family's/parents' surveys from previous year, and (3) creating a campus-wide framework for curriculum alignment by grade level with pacing guides for meeting instructional targets for student mastery.

Comparing. At the beginning of the year all educators (principals, academic coaches, and teachers) noted in their responses that they look at the national, state, and district student data by grade level, from the previous year. They use the assessment data to identify strengths, and areas of growth. Four participants (two principals and two academic coaches) expressed how they review national, state, and district student data by grade level from the previous year. Participant P1 stated, "The data from assessments are used as a framework for curriculum design." Participant C1 said, "Formative and summative assessments are used. Both types should be used. Standardized assessments, diagnostic assessments, teacher made assessments, common assessments, classwork, and projects to identify the curriculum materials [are] needed for the year." Participant P2 stated, "Diagnostic assessments are used to identify culturally and linguistically curriculum materials as well as identify the individual needs of students." Participant C2 noted, "At the beginning of the year assessments are used to design the school-wide curriculum. We look at the state testing data, teacher assessments, and diagnostic assessments to identify the curriculum needs for the school building." There were two teachers who mentioned the analysis of previous year assessment data for curriculum design. Participant T7 noted "Within my school formative assessments' data from the previous year (state, national, and district assessment data) is used for DDDM to create a curriculum framework, along with team collaboration (input from teachers) and research.

Participant T2 stated “Formative assessments [from previous year] are used throughout the school to identify culturally and linguistically appropriate curriculum materials and design the campus wide curriculum framework.”

Accessing. All participants’ responses indicated that at the beginning of the year there are schoolwide data meetings to analyzes data collected from students’ summative assessments, teachers’ anecdotal records, and family’s/parents’ surveys from the previous year. Accessing this data allowed educators to identify the curriculum needs for the school for the current year.

Both principals and one academic coach expressed how they used the data to identify curriculum needs for the school. Following are representative comments from the participants. Participant C2 stated, “The Formative assessment, and climate and culture surveys completed by stakeholders help to identify the curriculum materials.” Participant P2 noted, “Assessments are guides to let us know what to do, we also use climate surveys as well. P2 continued the topic by saying, “Assessment data and survey data is needed to show growth, and recognition of student needs.”

Creating. At the start of the year, all participants noted that a campus-wide framework for curriculum is created with the participation and input of principals, academic coaches, and teachers. The framework consisted of ensuring the curriculum is aligned by grade level with pacing guides for meeting instructional targets for student mastery. By creating the framework for the school at the beginning of the year, educators have a map to guide them throughout the school year.

Both Principals explained how they lead others in creating the framework for the school at the beginning of the year. Participants P1 noted, “The data from assessments are used as a framework for curriculum design.” Participate P2 said, “The DDDM will identify gaps in the grade as well as gaps in curriculum and standard.” Both academic coaches discussed how they collaborate with principals and teachers to help create the campus-wide framework. Participant C2 stated “At the beginning of the year assessments are used to design the school-wide curriculum.” C2 continued with the topic and stated “We look at the state testing data, teacher assessments, and diagnostic assessments to identify the curriculum needs for the school building. Creating the campus-wide framework is normally created by the Principals with assistance of the academic coaches.

Continuous Activities

Throughout the year participants noted in their responses that they continue to review data. The purpose of reviewing the data is to make sure that the campus-wide curriculum design is meeting the needs of the students. Participants noted that in order to monitor the effectiveness of the curriculum they work in a collaborative setting throughout the school year. This allows them to identify any necessary changes that need to be made. The fourth theme of RQ2 “collaborating” falls under the continuous manner category.

Collaborating. All participates responses demonstrated that collaborating with academic coaches, grade-level team members, and administrators was continuous throughout the school year. Collaborative meetings allowed the educators to identify gaps in the curriculum and identify if there needs to be changes made to the campus-wide

framework. A total of two principals, two academic coaches, and all eight teachers mentioned collaborating throughout the year. Participant P2 stated, "Assessment data is used bi-weekly to monitor curriculum." Participant P1 also stated, "Weekly data meetings occur to discuss curriculum design and instructional practices." P1 continued ad stated, "Individual sessions occur with teachers two times a week to discuss data and create plans." Participant T1 stated, "We have weekly data meetings with our administration team. This includes our grade level Assistant Principal and Principal. Our academic coach also sit is as well. The data meeting is used to discuss individual class data and grade level data." Participant C1 noted, "Throughout the year we collaborate by reviewing data to see if the campus-wide curriculum is meeting the needs of students." Participant C2 stated "Monitoring the curriculum designs allows us to identify learning gaps and needs to be identified as far as curriculum design." Participant C2 continued on the topic and noted, "In order to do this we have monthly curriculum meetings with administrators and teachers." Participant T8 stated, "Weekly collaboration and data meetings are held twice a week." Participant T8 continued to say, "One day is used to group students according to data results and creating a baseline for student achievement held with the Academic Coach."

Culminating Activities

The purpose of culminating activities is to review the curriculum materials. The fifth theme of RQ2 "reviewing" falls under culminating activities. At the end of the year educators review assessment data to identify the alignment of curriculum materials. Culminating activities allows educators to identify if the curriculum design was effective

in meeting goals. Educators also begin making plans for the following year while conducting culminating activities.

Reviewing. Culminating activities involving reviewing data collected throughout the year to analyze data and project plans for the following school year. Based on the participants' response I found that at the end of the year educators take time to review current and new curricular materials. They also review resources as well. The educators review these items to check for cultural and linguistic appropriateness, relevance, and alignment to standards. This review is conducted with stakeholder groups.

Two principals, one academic coach, and five teachers explained the end of the year procedures that are conducted to review current and new curricular materials. Participant P2 stated, "The data is separated in a quantitative manner for me to review." P2 continued, "The numbers are viewed to identify the gaps in the curriculum. We use this data to plan for the next school year." Participant P1 stated, "At the end of the year we review materials to see which ones were beneficial as well as look at new material to pan for the next school year." Participant T2, noted, "Formative assessments are used throughout the school and the data is reviewed at the end of the year to identify culturally and linguistically appropriate curriculum materials." Participant T2 went on to say that "We [grade level teachers] review old and new materials that could be used for the future school year." Participant T4 stated, "Summative assessments are used to help me identify what changes may need to be made to curriculum materials in the next unit/year in order to better reach my students." Participant T6 noted, "At the end of the year, we discuss data as a school for improvement plan."

Discrepant Data

Any response of an individual that does not support the major themes or challenge the themes that emerged in a study is known as discrepant data. In this study, I found discrepant data related to the question "how" early childhood educators use students' assessments for DDDM to design curriculum. The majority of the educators noted that they used a number of student assessments to design and identify materials for their classroom curriculum. However, three teachers responded differently. T3 stated, "We tend to choose something that supports the majority of our students, then we accommodate individual students as needed." T5 noted, "I know that all assessments are inherently biased, and I don't have a good answer for this." Lastly T8 stated, "Formative assessments are used to make DDDM to identify linguistically appropriate curriculum material, however I do not feel they identify culturally appropriate curriculum materials."

Summary of Key Findings in Relation to Research Questions

This study included two research questions aligned with the conceptual framework. The research questions are as follows: RQ1 How do early childhood principals, academic coaches, and teachers use assessments for DDDM to plan for instruction? RQ2 How do early childhood principals, academic coaches, and teachers use assessments for DDDM to design curriculum? RQ1 was designed to identify how early childhood are using student assessment data to plan for instruction in early childhood setting. The study indicated that educators use student assessment data to plan for instruction in a number of ways. The study found in order to plan for instruction educators work in a collaborative setting. They meet with academic coaches, grade-level

teams, and administrators to plan for instruction. When analyzing student assessment data in collaborative meetings the educators analyze desegregated and segregated data. This data is analyzed to identify effective instructional practices and student mastery. A variety of assessments are also analyzed formal, informal, summative, and diagnostic assessments to identify learning gaps, students' demonstrated knowledge, and dispositions. Throughout the year to continue to plan effective instructional strategies educators conduct progress monitoring which involves students as team members for DDDM. By holding collaborative meetings, analyzing data, and conducting progress monitoring, educators are able to plan for instruction in a manner that will ensure student success.

Findings related to RQ2, indicated that all participants comprised of a group of 2 principals, 2 academic coaches, and 8 teachers used students' assessment data to designing curriculum following a systematic process. The process includes preliminary, continuous, and culminating activities.

During the preliminary step educators review data from state, district, and national assessments. Educators also review the data from teacher notes and climate surveys. The data is reviewed to help educators identify learning gaps and the needs of students. Once the data is reviewed educators work to complete a campus-wide curriculum framework. The framework is designed to meet the needs of the children and faculty within the school building. In the continuous stage, educators work in a collaborative setting. All participants (principals, academic coaches, and teachers) work together to monitor curriculum materials and student success throughout the year. The

purpose of the collaborative meetings is to ensure that the campus-wide curriculum design and materials are effective. Lastly, culminating activities occur at the end of the year. These activities include reviewing current and new curriculum materials. All educators (principals, academic coaches, and teachers) use this culminating review to reflect on the outcomes from the school year and make decisions about the future school year. Findings of this study aligned with the two research questions. Principals, academic coaches, and teachers of this study demonstrated that they used student assessment data for DDDM to plan for instruction and design curriculum following a systematic, year-long process.

In summarizing the data collected from participants' interviews, I found that all educators systematically used assessment data by engaging in preliminary, continuous, and culminating activities throughout the academic year. During preliminary activities, all educators analyzed a variety of assessment data, which included national, state, and district assessment data. Analyzing data gave educators a foundation for engaging in DDDM to identify the instructional and curricular needs for schools in the district. While engaging in DDDM, elementary school educators collaborated to design a campus-wide curriculum framework. Early childhood educators engaged with the DDDM team as a part of the preliminary activities. Continuous activities required early childhood educators to use a variety of student assessments for progress monitoring by teachers and students. Educators collected data on a continuous basis and worked in collaborative settings to analyze their students' assessment data. Collecting and analyzing this data allowed educators the ability to identify any necessary changes that may need to be made

to instructional practices and curriculum design. Culminating activities consisted of engaging in DDDM to review the efficacy of the campus-wide curriculum framework in meeting standards, as well as the cultural and linguistic appropriateness of materials used for instruction.

Evidence of Trustworthiness

Trustworthiness refers to the extent of confidence in data, interpretation, and methods used to ensure the quality of a study (Connelly, 2016). According to Connelly (2016) researchers should address the trustworthiness of qualitative research as it relates to the concepts of credibility, dependability, transferability, and confirmability. In the following subsections I will describe each concept and the approach I used to strengthen the trustworthiness of this study.

Credibility

Credibility of the study is the most important criteria (Connelly, 2016). There are several techniques suggested by Connelly (2016) that establish credibility, which include prolonged engagement with participants, persistent observation if appropriate to the study, peer-debriefing, member-checking, and reflective journaling (Connelly, 2016). In this study I used reflective journaling to document any biases I may have had. I also used the technique of member checking. I used the member checking technique by sending the transcribe responses to the participants and asking them to review the transcripts for accuracy.

Dependability

The stability of the data over the conditions of the study and over time refers to the study's dependability (Connelly, 2016). In order to establish dependability there were a number of procedures that I followed. Throughout the process I made sure to keep a research journal in which I documented important details of the data collection and analysis process, the notes of activities, and the problems I encountered. Additionally, in order to avoid biases or misinterpretation of data I made sure to use an interview protocol (see Appendix A).

Transferability

According to Connelly (2016) transferability refers to the degree to which the results can be generalized or transferred to other contexts or settings. In order to support the study's transferability, researchers should provide detailed and rich description of the context location, people studied, location, and being transparent about trustworthiness and analysis (Connelly, 2016). As recommended by Connelly (2016), I used purposeful sampling in my study, and described the settings, participants, procedures, and findings pertaining to this study in detail.

Confirmability

Confirmability refers to the degree to which the study's results could be corroborated or confirmed by others (Connelly, 2016). As mentioned previously in this chapter I used a reflective journal and an audit trial. My experience teaching in a public school in particular a grade with high-stakes testing led me to believe that DDDM is a necessity and should be conducted regularly to achieve the desired student outcomes.

Furthermore, some literature that I read for this study suggested that DDDM along with other instructional tools can be used to achieve the desired student outcomes (Abrams et al., 2016; Im, 2017). Using the reflective journal helped me to reflect on the need to minimize my own thoughts regarding DDDM in early childhood education.

Summary

This section provided a description of the setting, participants' demographics, data collection procedures, and data analysis. The data analysis section included information on organizing, validating, grouping, categorizing, and developing codes, categories, and themes. In addition, this section discussed strategies to enhance trustworthiness of this qualitative research study based on concepts of reliability and validity. I also presented key findings in relation to the research questions. In Chapter 5, I discuss findings from this study and provide an alignment of those findings to current literature, implications of findings, and recommendations for further research based on the findings.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this study was to explore how early childhood educators use students' assessments for DDDM to plan for instruction and design curriculum. This study was conducted to address local concerns as well as a gap in the literature on practice related to the lack of knowledge about how educators use students' assessments for DDDM (see Datnow & Hubbard, 2015; see Jefferson et al., 2017; Rasinski et al., 2017). The study was conducted to answer two RQs:

RQ1: How do educators use assessments for DDDM to plan for instruction?

RQ2: How do educators use assessments for DDDM to design curriculum?

In order to collect data, I interviewed 12 early childhood educators (two principals, two academic coaches, and eight third grade teachers) from two rural elementary schools via video conferencing systems. Each principal and academic coach was asked five open-ended questions about the use of students' assessments for DDDM. Each teacher was asked six open-ended questions about the use of students' assessments for DDDM. I determined that following a basic qualitative study methodological paradigm with interviews supported my role as researcher (see Lodico, 2010).

Conducting a basic qualitative study with semi-structured interviews allowed me to explore how educators have used and intend to continue to use students' assessments for DDDM. In this study, I focused on the participating early childhood educators' perspective on how they used students' assessments for DDDM. The findings based on my analysis of data from semistructure interviews with 12 early childhood educators in two rural elementary schools located in the Southeastern U.S. In Chapter 2, I reviewed

peer-reviewed journal articles and research-based national and state publications from departments of education, which highlighted researchers' findings about DDDM in early childhood settings. I sought to understand how assessment data was used in the DDDM process by early childhood educators. My review of peer-reviewed journal articles and reports published over the previous 5 years revealed that few studies have presented how early childhood educators use students' assessments for DDDM (see Chizhik & Chizhik, 2018; see Farrell & Marsh, 2016). However, studies investigating this phenomenon have been recommended by researchers (Chizhik & Chizhik; Farrell & Marsh; Förster et al., 2018; Harvey & Ohle, 2018; Park, 2018; Reed, 2015). Therefore, I found insufficient studies on early childhood educators' use of students' assessment in DDDM. In Chapter 3, I summarized the methodology, research design, and data collection processes followed in this basic qualitative study with semi-structured interviews. In Chapter 4, I presented findings of the study that were based on data collected from interviews with 12 early childhood educators and the member checking process. I used member checking to ensure accuracy of the data collected. I assumed that the responses of the early childhood educators disclosed their uses of students' assessments for DDDM to plan for instruction and design curriculum in an honest, detailed, and concrete manner. In Chapter 5, I interpret the key findings of the study, discuss the study's limitations, offer recommendations for further research, consider implications for positive social change, and offer a conclusion for the chapter.

Findings from interview data with 12 early childhood educators revealed that educators use students' assessments in DDDM to plan for instruction and design

curriculum. During the analysis of data, I found that the educators in the study frequently mentioned working in collaborative settings with colleagues in collaboration while analyzing student assessment data and made decisions about instruction and curriculum throughout the year. Participants also mentioned that they worked in a collaborative setting while analyzing student assessment data from the previous academic year to make decisions concerning design of the curriculum and creating a campus-wide curriculum framework that would become part of the district-wide framework.

Participants expressed the importance of using a variety of student assessment data for DDDM. Many of the participants were able to identify different assessment tools and strategies that generated student data that were used for DDDM. Participants also viewed that students' assessment data were used to identify instructional strategies that focused on effective differentiated instructional practices, which were also relevant and culturally and linguistically appropriate for their students. The findings of this study also revealed that DDDM activities engaged in by educators followed a systematic approach involving stages, such as preliminary activities, continuous activities, and culminating activities.

Based on the analyses and interpretations of results of my study, early childhood educators were consistent in revealing information about how they used students' assessment data for DDDM. Participants suggested that using student assessment data for DDDM is an essential component to student success. They expressed the importance of using student assessment data for DDDM to make decisions about their instructional plans and practices along with their curriculum design.

Interpretation of the Findings

In this section I will reflect on my key findings in relation to the literature from Chapter 2 and the conceptual framework that formed the basis for this study. Findings from the research both confirm and extend knowledge about how early childhood educators use students' assessment for DDDM as suggested by the Gill, Borden, and Hallgren (2014) framework for data-driven decision making. Data from this basic qualitative study revealed that a climate for embracing DDDM as a school reform initiative exists in the local district, which aligns with the findings of Dunlap and Piro (2016) and Snodgrass et al. (2017). Findings indicate that early childhood educators participate with their colleagues in the district by using students' assessments for DDDM during three stages or categories involving (1) preliminary activities, (2) continuous activities, and (3) culminating activities. Categories found in my study further refine those categories identified as phases of DDDM by Reeves (2017). Data analysis allowed me to answer the two RQs of this study and give recommendations based on my findings. These recommendations are shared in a later section of Chapter 5.

Preliminary Activities

Preliminary activities comprise the first stage of the DDDM processes that participants described. The preliminary activities included accessing data from several sources that included students' assessment data from the previous year, reviewing and comparing this data, identifying which type of student-assessment data to use for a campus-wide curriculum framework, and creating a campus-wide framework for DDDM that included a schedule for collaborative meetings throughout the year. These

preliminary activity findings aligned with the theory of action proposed in the conceptual framework by Gill et al. (2014). Therefore, the first step in the series of actions involved educators assembling students' assessment data for comparison and analysis purposes (see Gill et al., 2014). According to participants, identifying the appropriate data to analyze plays an important role in DDDM, which is confirmed in previous studies (see King 2019; see Love et al., 2019; see Schifter et al., 2016; see Schildkamp, 2019). Participants confirmed that they used the previous year students' assessment data during the preliminary stage to plan for instruction and design curriculum. The second activity in the preliminary stage required educators to work in a collaborative setting. Working in a collaborative climate allows educators to identify students' needs, create effective lesson plans, and create a climate for data use that will produce positive student outcomes (see Dunlap & Piro, 2016; see Snodgrass et al., 2017; see Vanlommel et al, 2016). In order to identify students' strengths and needs, educators must conduct an analysis that ensures the resulting data is relevant and diagnostic (Gill et al., 2014). Principals, academic coaches, and teachers are a part of the collaborative setting. In the collaborative setting, educators compared national, state, and district data of students by grade levels. Comparing student data at various levels allows educators to have a big picture view of local students' strengths and areas for growth (Jefferson et al., 2017). After identifying areas of strengths and growths, educators indicated that they focused on creating an effective plan or framework for the school year. Based on participants' responses, this plan consisted of effective differentiated assessments, instructional strategies, and curriculum that were culturally and linguistically appropriate (see King, 2019). This plan

then became part of the campus-wide curriculum framework. Educators found that from previous years, a data-based instructional framework had a positive effect on students (see Lai et al., 2014; see McNaughton et al., 2012; see Poortman & Schildkamp 2016; see Van Geel et al, 2016). In summary, participants emphasized that at the beginning of the year, they used students' assessment data from the previous year for preliminary activities. Collaborative teams reviewed national, state, and local student data. They identified high-quality data as they met and worked in collaborative teams to identify students' needs and areas of growth, which would influence their planning for types of assessments and instruction, and designing of the curriculums (see Gill et al.). They also work in collaborative settings to identify effective instructional strategies and create an effective campus-wide framework for curriculum.

Continuous Activities

Participants noted that the second stage involved processes of continuous activities they conducted by using relevant diagnostic data from a variety of students' assessments for DDDM, which aligned with the DDDM framework presented by Gill et al. (2014). Participants found that using student assessment data allowed them to identify appropriate instructional strategies that met students' diverse needs (see Abrams et al., 2016; Curry et al., 2016; Jung et al., 2017). Educators in the study found that using summative, formal, and informal student assessment data allowed them to identify effective differentiated instructional strategies (see Faber et al., 2017; see Park & Datnow, 2017; see van der Scheer et al., 2017). With data, participants were able to then plan for differentiated instructional needs of specific students as was highlighted as an

outcome of DDDM by Jefferson et al. (2017). Further, participants shared that when teachers make differentiated instruction operational as part of the curriculum student achievement was positively impacted, which was in keeping with findings of Faber et al. (2017). The design of the tiered curriculum is flexible as it is continuously adjusted as educators use the students' assessment data throughout the different units of learning to identify student mastery, and their needs for both remediation and extension. Using a variety of assessments to monitor student progress helped teachers and academic coaches identify and plan appropriate differentiated instructional strategies for the students (see Förster et al., 2018) within a tiered curriculum. This process also allowed students' involvement in their individual progress monitoring, which motivated them to achieve success (January et al., 2018; Jenkins et al., 2017). In summary, participants commented that when using students' assessment data for DDDM to plan for instruction and curriculum design, a variety of assessment data was analyzed. The assessment data was analyzed to identify students' needs in order to plan for instruction and design curriculum (see Brown, 2016). Participants also noted that using a variety of assessment data allowed them to identify differentiated instructional needs for specific students.

Culminating Activities

The final stage identified by analysis of participants' data consisted of processes conducted by educators that fell under the category of "culminating" activities. Participants shared that they summarized both qualitative and quantitative data to measure the effectiveness of the curriculum framework and instructional strategies. The culminating activities allowed educators to identify if the curriculum design was effective

in impacting student progress as found by Martone et al. (2018). Participants also noted that analyzing the all assessment data at the end of the year, which included students' data, is the core to creating future plans that will impact student achievement (see Bratsch et al., 2017; see Rasinski et al., 2017; see van der Scheer & Visscher, 2016). Participants also mentioned that they reviewed curriculum materials as well to ensure the effectiveness of their cultural and linguistic appropriateness for planning instructional strategies, as well as the relevance an appropriateness of the materials to the curriculum framework (see Bratsch et al., 2017; Rasinski et al., 2017; van der Scheer & Visscher, 2016). In summary, in order to measure the success of the current school year and plan for the future school year, educators suggested that they analyze student assessment data to make data driven decisions about curriculum materials, effectiveness of instructional strategies, and appropriateness of curriculum design as it applied to creating a curriculum framework for the future school year.

Summary for RQ1 and RQ2

Results of this study were analyzed and interpreted in the context of the conceptual framework that identified how educators use students' assessment data for DDDM and current relevant literature. Gill et al. (2014) created a framework that outlined how educators should use data for DDDM. According to Gill et al. (2014) effective DDDM required individuals to (a) assemble high-quality raw data; (b) conduct analysis that ensures resulting data are relevant and diagnostic; and (c) use relevant and diagnostic data to inform instructional and operational decisions. The 12 early childhood educators demonstrated the three sequential steps suggested by Gill, Borden, and

Hallgren. Based on findings of this study, I elaborated on the framework of Gill et al. as I addressed this study's purpose to describe how educators use assessments for DDDM to plan for instruction and design curriculum. According to the participants, educators work in a climate of collaboration as they use assessment data during three different stages or categories of activities. Preliminary activities involved (1) comparing national, state, and district student data by grade level bands to determine strengths and areas for growth, (2) accessing results of a variety of data collected from students' summative assessments, teachers' anecdotal records, and family's/parents' surveys from previous year, and (3) creating a campus-wide framework for curriculum alignment by grade level with pacing guides for meeting instructional targets for student mastery. Continuous activities involved the following: (1) collaborating with academic coaches, grade-level team members, and administrators; (2) focusing on plans for differentiated instructional practices and curriculum design for extension and/or remediation based on individual assessment data; (3) selecting informal, formal, formative, summative, and diagnostic holistic assessments to identify students' demonstrated knowledge, skills, dispositions and learning gaps; (4) analyzing desegregated and segregated data for evidence of effective individualized differentiated instructional practices and curriculum that led to student mastery; and (5) monitoring assessment data by teams and involving students as team members within the DDDM system for continuous progress monitoring. Culminating activities involved use of assessment data at the end of the year as follows: (1) reviewing current and new curricular materials and resources with stakeholder groups for cultural and linguistic appropriateness, relevance, and alignment to standards; and (2)

summarizing quantitative and qualitative data from students' assessments for DDDM about the appropriateness an effectiveness of classroom curriculum materials in meeting goals for positive student outcomes.

Limitations of the Study

The number of early childhood educators interviewed was limited to 12 participants who were employed in two different schools. The research was limited to the educators who volunteered to participate in the study. Therefore, the different educators' responses were limited as well. The geographic area was also limited to the Southeastern area of the United States. In addition, all early childhood educators needed to have 3 or more years of experience in the early childhood setting.

The data collection was a challenge because of the COVID-19 pandemic; however, the IRB granted approval for researchers to conduct interviews via video conferencing. Many of the participants were available immediately, while others had some challenges and had to reschedule the initial video conference. In the end, all 12 participants were able to be interviewed, answer interview questions, and participate in the member checking process.

As an ECE professional, the potential for biased from my part could have been a limitation. To avoid bias, I kept a reflective journal and I reviewed my interview protocol with two experts. I was very careful when conducting the video conferencing interviews and creating the interview questions, of not showing my opinions and my thought process for DDDM to manipulate the information provided to the participants. I kept an accurate record of their responses by recording the interview, transcribing the responses, and sent

each participant a copy of the transcribe responses in an email for them to do member checking as credibility of information in the study.

Recommendations

As a research, I felt the need to explore how educators use students' assessment data for DDDM. After analyzing data of the study, I identified that educators use students' assessment data for DDDM to make instructional and operational decisions as they plan for instruction and design curriculum. The study took place in a rural area of the Southeastern U.S. where public school educators have been exposed to DDDM and have received ongoing support for DDDM. Therefore, I recommend that further studies about student assessment data for DDDM be conducted throughout the United States with diverse groups of educators in the early childhood setting for private and charter schools. Although the study's participants were from two different settings and focused on how students' assessments are used for DDDM this current study did not identify how educators use students' assessment for specific subjects. Therefore, I recommend that research investigate how educators use students' assessment for DDDM for specific subjects such as math, reading or science be considered in the future.

This study was conducted with 12 experienced early childhood educators from two different schools. The educators' responses have the potential to provide insights that will help other early childhood educators understand how to use students' assessment data for DDDM and the relationship between analyzing data and student achievement. All participants shared their practices that they follow when using students' assessment

data for DDDM. Recommendations made in this section are based on findings of this study and do not exceed study boundaries.

Implications

This study addresses a gap in the research on practice related to how educators use students' assessment data for DDDM. This study highlights implications associated with DDDM in education. Findings from this study have the potential to contribute to positive social change in early childhood settings. This study's data revealed a systematic process that educators follow when using students' assessment data for instructional planning and curriculum design in a climate of collaboration. The study results can have a positive social impact on ECE because educators and students will benefit from the systematic process. By revealing a systematic process, school leaders can use the data found in this study and incorporate the systematic approach to their DDDM framework when analyzing student assessment data. During school data meetings, leaders can collaboratively use the recommendations presented in this study to help them analyze student assessment data in a manner that will impact planning and student achievement positively. Findings may also help school leaders identify areas for improvement when educators engage in use of students' assessments for DDDM to plan for instruction and design curriculum.

Conclusion

The purpose of my research was to explore, report, and supply with data the results of my study regarding how educators use students' assessment data for DDDM to plan for instruction and design curriculum. After analyzing data collected from semi

structured interviews with early childhood educators, the concept of using students' assessments for DDDM to make instructional and operational decisions was supported. Using data for DDDM concerning instructional and operational decision has a positive impact on student success, which is in keeping with the DDDM framework of Gill et al. Based on findings of this study, educators work in a climate of collaboration as they use students' assessment data during three stages or categories of activities for DDDM to plan for instruction and design curriculum.

Findings from this study revealed that educators use students' assessment data for DDDM in a systematic manner. The system consists of (1) preliminary activities, (2) continuous activities, and (3) culminating activities. Based on my analysis and interpretations, I found that educators conduct several analyses in each stage of the system for DDDM. Educators analyze national, state, and district student data at the beginning of the year, as preliminary activities to design a campus-wide curriculum framework. In the second stage of the system, as continuous activities educators use a variety of assessments to monitor student mastery and identify differentiated instructional strategies to benefit the diverse groups of learners. During the final stage of the system, as culminating activities educators use students' assessment data to identify the alignment of curriculum materials and review curriculum materials for cultural and linguistic appropriateness. I found that educators believe that analyzing students' assessment data requires a systematic approach, and when done in a systematic manner, DDDM promotes student success.

References

Abbott, A. L., & Wren, D. G. (2016). Using performance task data to improve instruction. *Clearing House*, *89*(1), 38–45. doi:10.1080/00098655.2016.1138924

Abrams, L., Varier, D., & Jackson, L. (2016). Unpacking instructional alignment: The influence of teachers' use of assessment data on instruction. *Perspectives in Education*, *34*(4), 15–28. doi:10.18820/2519593x/pie.v34i4.2

Baas, D., Castelijns, J., Vermeulen, M., Martens, R., & Segers, M. (2015). The relation between assessment for learning and elementary students' cognitive and metacognitive strategy use. *British Journal of Educational Psychology*, *85*(1), 33–46. doi:10.1111/bjep.12058

Bransford, J., Brown, A., Cocking, R., Donovan, S., & Pellegrino, W. (2000). *How people learn: Brain, mind, experience, and school*. Washington, DC: National Academy Press.

Bratsch, H. M. E, Vernon, F. L., Varghese, C., & Garwood, J. (2017). Child skills and teacher qualifications: Associations with elementary classroom teachers' reading instruction for struggling readers. *Learning Disabilities Research & Practice (Wiley-Blackwell)*, *32*(4), 270–283. doi:10.1111/ldrp.12136

Brown III, G. (2016). Leadership's influence: A case study of an elementary principal's indirect impact on student achievement. *Education*, *137*(1), 101–115. Retrieved from Education Source Database. (Accession No. 118494321)

Burns, M. K., Pulles, S. M., Maki, K. E., Kanive, R., Hodgson, J., Helman, L. A., Preast, J. L. (2015). Accuracy of student performance while reading leveled books rated

at their instructional level by a reading inventory. *Journal of School Psychology*, *53*(6), 437–445. doi:10.1016/j.jsp.2015.09.003

Connelly, L. M. (2016). Understanding research: Trustworthiness in Qualitative Research. *MEDSURG Nursing*, *25*(6), 435–436. Retrieved from EBSCO Database. (Accession No.120221607)

Chizhik, E. W. & Chizhik, A. W. (2018). Using Activity Theory to examine how teachers' lesson plans meet students' learning needs. *Teacher Educator*, *53*(1), 67–85. doi:10.1080/08878730.2017.1296913

Curry, K. A., Mwavita, M., Holter, A., & Harris, E. (2016). Getting assessment right at the classroom level: Using formative assessment for decision making. *Educational Assessment, Evaluation and Accountability*, *28*(1), 89–104. doi:10.1007/s11092-015-9226-5

Datnow, A., & Hubbard, L. (2015). Teachers' use of assessment data to inform instruction: Lessons from the past and prospects for the future. *Teachers College Record*, *117*(4). Retrieved from Eric Database. (Accession No. EJ1056748)

Dunlap, K., & Piro, J. S. (2016). Diving into data: Developing the capacity for data literacy in teacher education. *Cogent Education*, *3*(1). doi:10.1080/2331186X.2015.1132526

Elleman, A. M. ., Olinghouse, N. G. ., Gilbert, J. K. ., Spencer, J. L., & Compton, D. L. (2017). Developing content knowledge in struggling readers. *Elementary School Journal*, *118*(2), 232–256. doi:10.1086/694322

Faber, J. M., Glas, C. A. W., & Visscher, A. J. (2017). Differentiated instruction in a data-based decision-making context. *School Effectiveness and School Improvement*, *29*(1), 43–63. doi:10.1080/09243453.2017.1366342

Farrell, C. C., & Marsh, J. A. (2016). Contributing conditions: A qualitative comparative analysis of teachers' instructional responses to data. *Teaching & Teacher Education*, *60*, 398–412. doi:10.1016/j.tate.2016.07.010

Filderman, M. J., Toste, J. R., Didion, L. A., Peng, P., & Clemens, N. H. (2018). Data-based decision making in reading interventions: A synthesis and meta-analysis of the effects for struggling readers. *Journal of Special Education*, *52*(3), 174–187. doi:10.1177/0022466918790001

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

Foster, E. (2019). Study examines teachers' perceptions of student achievement data. *Learning Professional*, *40*(3), 20–23. Retrieved from Eric Database. (Accession No. EJ1221022)

Gill, B., Borden, B., & Hallgren, K. (2014). *A conceptual framework for data-driven decision making*. Princeton, NJ: Mathematica Policy Research Report.

Harris, L.M. (2018). Perceptions of Teachers about Using and Analyzing Data to Inform Instruction. Retrieved from EBSCO Discovery Service Database. (Accession No. wldu.dissertations.6748)

Harvey, H, & Ohle, K. (2018). What's the Purpose? Educators' Perceptions and Use of a State-Mandated Kindergarten Entry Assessment. Education Policy Analysis Archives, 26(141/142), 1–25. doi: 10.14507/epaa.26.3877

Hawn, A. (2019). Data-wary, Value-driven: Teacher Attitudes, Efficacy, and Online Access for Data-Based Decision Making. Retrieved from https://academiccommons.columbia.edu/doi/10.7916/d8-8yme-sb59. doi: 10.7916/d8-8yme-sb59

Heale, R., & Forbes, D. (2013). Understanding triangulation in research. Retrieved from https://ebn.bmj.com/content/16/4/98

Hoppey, D., & McLeskey, J. (2014). What are qualities of effective inclusive schools? In J. McLeskey, N. L. Waldron, F. Spooner, & B. Algozzine (Eds.) *Handbook of research and practice for effective inclusive schools* (pp. 17–29). New York: Routledge Publishers.

Hoppey, D., Black, W. R., & Mickelson, A. M. (2018). The evolution of inclusive practice in two elementary schools: Reforming teacher purpose, instructional capacity, and data-informed practice. *International Journal of Educational Reform*, *27*(1), 22–45. doi:10.1177/105678791802700102

Im, H.(2017). Kindergarten standardized testing and reading achievement in the U.S.: Evidence from the early childhood longitudinal study. *Studies in Educational Evaluation, 55*, 9–18. doi:10.1016/j.stueduc.2017.05.00

Jamshed, S. (2014). Qualitative research method-interviewing and observation. *Journal of basic and clinical pharmacy*, *5*(4), 87–88. doi:10.4103/0976-0105.141942

January, S., Van Norman, E. R., Christ, T. J., Ardoin, S. P., Eckert, T. L., White, M. J., & Cummings, K. (2018). Progress monitoring in reading: Comparison of weekly, bimonthly, and monthly assessments for students at risk for reading difficulties in grades 2-4. *School Psychology Review*, *47*(1), 83–94. doi: 10.17105/SPR-2017-0009.V47-1

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

Jenkins, J., Schulze, M., Marti, A., & Harbaugh, A. G. (2017). Curriculum-base measurement of reading growth: Weekly versus intermittent progress monitoring. Exceptional Children, 84(1), 42-54. https://oi.org/10.1177/0014402917708216

Jia, L., Hall, D., & Song, J. (2015). The Conceptualization of Data-driven Decision Making Capability. *AMCIS*. Retrieved from https://aisel.aisnet.org

Jingping S., Johnson, B., & Przybylski, R. (2016). Leading with data: An increasingly important feature of school leadership. *International Studies in Educational*

Administration (Commonwealth Council for Educational Administration & Management (CCEAM)), *44*(3), 93–128. doi: 10.3138/jspr.37.1.8

Jung, P. G., McMaster, K. L., & DelMas, R. C. (2017). Effects of early writing intervention delivered within a data-based instruction framework. *Exceptional Children*, *83*(3), 281–297. doi: 10.1177/0014402916667586

Jung, P., McMaster, K. L., Kunkel, A. K., Shin, J., & Stecker, P. M.(2018). Effects of data-based individualization for students with intensive learning needs: A meta-analysis. *Learning Disabilities Research & Practice (Wiley-Blackwell)*, *33*(3), 144–155. doi: 10.1111/ldrp.12172

Jung, P.-G., McMaster, K. L., & DelMas, R. C. (2017). Effects of early writing intervention delivered within a data-based instruction framework. *Exceptional Children*, *83*(3), 281–297. doi: 10.1177/0014402916667586

King, H. (2019). The future of assessment: Measuring success. *Early childhood assessment source.* Retrieved from, https://www.advanc-ed.org/source/early-childhood-assessment2

King, M., & Sims, C. (2016). Data-driven decision making for school improvement planning [Powerpoint Slides]. Retrieved from https://www.gadoe.org/School-Improvement/School-Improvement-Services/Documents/Events%20and%20Conferences/Winter%20ILC%202019/Data-Driven%20Decisions%20Presentation.pdf

Kuhn, K., Rausch, C., McCarty, T., Montgomery, S., & Rule, A. (2017). Utilizing nonfiction texts to enhance reading comprehension and vocabulary in primary

grades. *Early Childhood Education Journal*, *45*(2), 285–296. doi: 10.1007/s10643-015-0763-9

Lai, M. K., A. Wilson, S. McNaughton, and S. Hsiao. 2014. “Improving achievement in secondary schools: Impact of a literacy project on reading comprehension and secondary school qualifications.” *Reading Research Quarterly* 49 (3): 305–334. doi:10.1002/rrq.2014.49.issue-3.

Little, M., Cohen-Vogel, L., Sadler, J., & Merrill, (2019). Data-driven decision making in early education: Evidence from North Carolina’s pre-k program. *Education Policy Analysis Archives*, *27*(18), 1–23. doi: 10.14507/epaa.27.4198

Lodico, M., Spaulding, D., & Voegtle, K. (2010). *Methods in educational research: From theory to practice*. Hoboken, NJ:John Wiley & Sons.Love, H., Horn, E., & An, Z. (2019). Teaching observational data collection to early childhood preservice educators. *Teacher Education & Special Education, 42*(4), 297–319. doi:10.1177/088840641983614

Mandinach, E. B. (2012). A perfect time for data use: Using data-driven decision making to inform practice. *Educational Psychologist, 47*(2), 71-85. doi:10.1080/00461520.2012.667064

Mandinach, E. B., & Gummer, E. S. (2016). What does it mean for teachers to be data literate: Laying out the skills, knowledge, and dispositions. *Teaching and Teacher Education*, 60, 366-376. doi: 10.1016/j.tate.2016.07.011

Marsh, J. A. (2012). Interventions promoting educators' use of data: Research insights and gaps. *Teachers College Record*, 114(11), 1-48. Retrieved from EBSCO Discovery Service Database. (Accession No. 000313181400003)

Martin, C. S., Polly, D. D. P., Chuang Wang, Lambert, R. G. ., & Pugalee, D. K. (2016). Perspectives and practices of elementary teachers using an internet-based formative assessment tool: The case of assessing mathematics concepts. *International Journal for Technology in Mathematics Education*, *23*(1), 3–12. doi:10.1564/tme_v23.1.01.

Martone, A., Reagan, D., & Reed, G. (2018). Understanding the use of mathematics interim assessments: A case study. *International Electronic Journal of Elementary Education*, *10*(5), 515–523. doi: 10.26822/iejee.2018541301

McNaughton, S., M. Lai, and S. Hsaio. 2012. "Testing the effectiveness of an intervention model based on data use: A replication series across clusters of schools." *School Effectiveness and School Improvement* 23 (2): 203–228. doi:10.1080/09243453.2011.652126.

Meyers, B. B., Graybill, E. & Grogg, K. (2017). Preparing teachers for data-based decision making and response to intervention team collaboration. *Teacher Education & Practice, 30*(1), 137–156. Retrieved from Education Source Database. (Accession No. 125894825)

Newmann, F., Smith, B., Allensworth, E., & Bryk, A. (2001). Instructional program coherence: What it is and why it should guide school improvement policy. *Educational Evaluation and Policy Analysis, 23*(4), 297-321. Retrieved

from http://www.jstor.org/stable/3594132

Ortlieb, E., & McDowell, F. D. (2016). Investigating the effects of an experimental approach to comprehension instruction within a literacy clinic. *Current Issues in Education*, *19*(1), 1–16. Retrieved from Education Source Database. (Accession No. 113882736)

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Administration and policy in mental health*, *42*(5), 533–544. doi:10.1007/s10488-013-0528-y

Panolpho, B. (2018). Putting students in charge of their learning. Retrieved from https:///www.eutopia.org/article/putting-stuents-charge-their-learning

Park, V. (2018). Leading data conversation moves: Toward data-informed leadership for equity and learning. *Educational Administration Quarterly*, *54*(4), 617–647. doi:10.1177/0013161x18769050

Park, V., & Datnow, A. (2017). Ability grouping and differentiated instruction in an era of data-driven decision making. *American Journal of Education*, *123*(2), 281–306. doi:10.1086/689930

Patton, M. Q. (2015). Qualitative research and evaluation methods (5th ed.). Thousand Oaks, CA: Sage.

Poortman, C. L., and K. Schildkamp. 2016. Solving student achievement focused problems with a data use intervention for teachers. *Teaching and Teacher Education, 60,* 425–433. doi:10.1016/j.tate.2016.06.010.

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

Reed, D. K. (2015). Middle level teachers' perceptions of interim reading assessments: An exploratory study of data-based decision making. *Research in Middle Level Education Online*, *38*(6), 1–13. doi: 10.1080/19404476.2015.11462119

Reeves, T. (2017). School level and other differences in Illinois teachers' use of data to inform instruction. *Mid-Western Educational Researcher*, *29*(4), 332–354. Retrieved from Education Source Database. (Accession No. 128953604)

Schifter, C. C., Natarajan, U., Ketelhut, D. J., & Kirchgessner, A. (2014). Data-driven decision making: facilitating teacher use of student data to inform classroom instruction. *Contemporary Issues in Technology and Teacher Education*, *14*(4). Retrieved from https://www.citejournal.org/volume-14/issue-4-14/science/data-driven-decision-making-facilitating-teacher-use-of-student-data-to-inform-classroom-instruction

Schildkamp, K. K. N. (2019). Data-based decision-making for school improvement: Research insights and gaps. *Educational Research,61*(3), 257-273. doi: 10.1080/00131881.2019.1625716

Schildkamp, K., Poortman, C., Ebbeler, J., & Pieters, J. M. (2019). How school leaders can build effective data teams: Five building blocks for a new wave of data-

informed decision making. *Journal of Educational Change*, *20*(3), 283–325.doi: 10.1007/s10833-019-09345-

Simpson, A., & Quigley, C. F. (2016). Member checking process with adolescent students: Not just reading a transcript. Qualitative Report, 20, 377-392. Retrieved from https://nsuworks.nova.edu/tqr/vol21/iss2/12

Snodgrass R., V., Bell, E. R. ., & Monroy, C. (2017). A descriptive analysis of instructional coaches' data use in science. *School Effectiveness & School Improvement*, *28*(2), 217–241. doi:10.1080/09243453.2016.1255232

Sorrells, M.L. (2019). Data-Driven Decision Making about Single-Sex Instructional Grouping at an Elementary School. Retrieved from https://scholarworks.waldenu.edu/dissertations/6485

Stecker, P. M., Lembke, E. S., & Foegen, A. (2008). Using progress-monitoring data to improve instructional decision making. *Preventing School Failure*, *52*(2), 48–58. Retrieved from Eric Database. (Accession No. EJ785472)

Stein, A., Connors, M. C., & Society for Research on Educational Effectiveness (SREE). (2016). *Measuring data use beliefs and practices in early education settings*. society for research on educational effectiveness. Retrieved from Eric Database. (Accession No. ED566973)

Sun, J., Przybylski, R., & Johnson, B. (2016). A review of research on teachers' use of student data: from the perspective of school leadership. *Educational Assessment, Evaluation & Accountability*, *28*(1), 5–33. doi: 10.1007/s11092-016-9238-9

U.S. Department of Health and Human Services. (1979). *The Belmont Report: Ethical principles and guidelines for the protection of human subjects of research*. Retrieve from www.hhs.gov/ohrp/humansubjects/guidance/belmont.html

Wang, Y. (2019). Is data-driven decision making at odds with moral decision making? a critical review of school leaders' decision making in the era of school accountability. *Values and Ethics in Educational Administration, 14*(2). Retrieved from ERIC Database. (Accession No. EJ1233012)

Williams, M., & Moser, T. (2019). The Art of Coding and Thematic Exploration in Qualitative Research. *International Management Review, 15*(1), 45–55. Retrieved from EBSCO Database. (Accession No. 135847332)

Van der Scheer, E. A., & Visscher, A. (2016). Effects of an intensive data-based decision making intervention on teacher efficacy. *Teaching & Teacher Education*, *60*, 34–43. doi: 10.1016/j.tate.2016.07.025

Van der Scheer, E. A., & Visscher, A. (2016). Effects of an intensive data-based decision making intervention on teacher efficacy. *Teaching & Teacher Education*, *60*, 34–43. doi: 10.1016/j.tate.2016.07.025

Van der Scheer, E. A., Glas, C. A. W., & Visscher, A. J. (2017). Changes in teachers' instructional skills during an intensive data-based decision making intervention. *Teaching and Teacher Education*, *65*, 171–182. doi: 10.1016/j.tate.2017.02.018

Van Geel, M., T. Keuning, A. J. Visscher, and J. P. Fox. 2016. "Assessing the effects of a school-wide data-based decision-making intervention on student achievement

growth in primary schools." *American Educational Research Journal* 53 (2): 360–394. doi:10.3102/0002831216637346

Vanlommel, K., Vanhoof, J., & Van Petegem, P. (2016). Data use by teachers: The impact of motivation, decision-making style, supportive relationships and reflective capacity. *Educational Studies*, *42*(1), 36–53. Retrieved from ERIC Database. (Accession No. EJ1094630)

Vogel, L. R. (2018). Learning outside the classroom: How principals define and prepare to be instructional leaders. *Education Research International*, 2018, 1–14. doi:10.1155/2018/8034270

Wachen, J., Harrison, C., & Cohen-Vogel, L. (2017). Data use as instructional reform: exploring educators' reports of classroom practice. *Leadership and Policy in Schools*, *17*(2), 296–325. doi: 10.1080/15700763.2016.1278244

Washington, W. L. (2015). *A Case Study of RTI Data Teams*. Scholar Works. Retrieved from ScholarWorks Database. (Accession No. wldu.dissertations.2630)

Worrell, J., Dully, M. L., Brady, M., Dukes, C., & Gonzalez-Dehass, A. (2016). Training and generalization effects of a reading comprehension learning strategy on computer and paper-pencil assessments. *Preventing School Failure*, *60*(4), 267–277. doi: 10.1080/1045988X.2015.1116430

Appendix A: Elementary School Principal Letter of Cooperation

Mr./Ms./Dr. (Principal's Name):

My name is Brandy Jones. I am currently enrolled in a doctoral program at Walden University. As a part of the requirements for completing the Doctor of Education degree in Early Childhood Education from Walden University, I am conducting a qualitative study. The title of my dissertation is "Early Childhood Educators' use of Students' Assessments for Data-driven Decision Making." The purpose of this study is to explore how early childhood educators use students' assessments for data-driven decision making.

I have recently earned approval from the County School District to conduct my study in elementary schools within the district. I am, therefore, asking for your permission to conduct this study with educators from your school. This letter is to request your permission to recruit study volunteers from a pool of third grade teachers, academic coaches, and/or instructional support staff. I am also asking for your cooperation in providing me with names and email addresses of third grade teachers, academic coaches, and/or instructional support staff who have been employed for three years or more.

During recruitment, all potential volunteers for this study will receive an informed consent document that assures volunteers of precautions taken for their confidentiality. The names of the teachers, administrators, academic coaches, as well as the school and location will not be included in the final study. Participation is voluntary and there is no payment or incentive for participation. Volunteers will also be informed that they can stop the study at any time. Each video conference with volunteers is approximately 30-45 minutes in length and will be digitally audio recorded.

If you have any questions, please do not hesitate to contact me at.... I will be following this e-mail with a telephone call to your office. Thank you for your time and consideration.

Sincerely,

Brandy Jones
Doctor of Education candidate
Walden University

Appendix B: Principal Recruitment Email

Dear [*insert name*],
My name is ... and I am a doctoral candidate at Walden University. I am writing you to invite you to participate in a research study about how educators use students' assessments for data-driven decision making (DDDM) in early childhood education. My study will focus on how educators (teachers, administrators, and academic coaches) are using students' assessment data to make decisions concerning instructional practices and curriculum design. I received permission from the County School District to conduct research within the county. I obtained your contact information from your School Principal to recruit an Administrator.

Your confidentiality is a major priority. Your identity and the school where you are employed will remain confidential. Any details that might identify you or your school will not be included in the final dissertation. Your personal information will not be used for any purposes outside of this study. Please note that you can exit the study at any time .
If you agree to participate in the study you will simply send your response via email that will state ("I Consent") that you have given me your consent. Your confidentiality is a major priority. With your consent, I would then ask you to provide about 30-45 minutes of your free time for an video conference interview, that will be digitally audio recorded. The interview will consist of open-ended questions about DDDM, instructional practices, and curriculum design. The interview will be scheduled at a time that is most convenient for you. Once you have completed the interview I will provide a summary of the interview which will take approximately 10-15 minutes to read and give you feedback via email. There will be no compensation for participating in the study.

Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please contact.
Thank you.

Sincerely,
Brandy Jones

Appendix C: Academic Coach Recruit Email

Dear [*insert name*],
My name is ... and I am a doctoral candidate at Walden University. I am writing you to invite you to participate in a research study about how educators use students' assessments for data-driven decision making (DDDM) in early childhood education. My study will focus on how educators (teachers, administrators, and academic coaches) are using students' assessment data to make decisions concerning instructional practices and curriculum design. I received permission from the County School District to conduct research within the county. I obtained your contact information from your School Principal to recruit an Academic Coach.

Your confidentiality is a major priority. Your identity and the school where you are employed will remain confidential. Any details that might identify you or your school will not be included in the final dissertation. Your personal information will not be used for any purposes outside of this study. Please note that you can exit the study at any time.

If you agree to participate in the study you will simply send your response via email that will state ("I Consent") that you have given me your consent. Your confidentiality is a major priority. With your consent, I would then ask you to provide about 30-45 minutes of your free time for a video conference interview, that will be digitally audio recorded. . The interview will consist of open-ended questions about DDDM, instructional practices, and curriculum design. The interview will be scheduled at a time that is most convenient for you. Once you have completed the interview I will provide a summary of the interview which will take approximately 10-15 minutes to read and give you feedback via email. There will be no compensation for participating in the study.

Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please contact me.

Thank you.

Sincerely,
Brandy Jones

Appendix D: Teacher Recruitment Email

Dear [*insert name*],
My name is ... and I am a doctoral candidate at Walden University. I am writing you to invite you to participate in a research study about how educators use students' assessments for data-driven decision making (DDDM) in early childhood education. My study will focus on how educators (teachers, administrators, and academic coaches) are using students' assessment data to make decisions concerning instructional practices and curriculum design. I received permission from the County School District to conduct research within the county. I also obtained your contact information from your School Principal.

Your confidentiality is a major priority. Your identity and the school where you are employed will remain confidential. Any details that might identify you or your school will not be included in the final dissertation. Your personal information will not be used for any purposes outside of this study. Please note that you can exit the study at any time.

If you agree to participate in the study you will simply send your response via email that will state ("I Consent") that you have given me your consent. Your confidentiality is a major priority. With your consent, I would then ask you to provide about 30-45 minutes of your free time for a video conference interview, that will be digitally recorded. The interview will consist of open-ended questions about DDDM, instructional practices, and curriculum design. The interview will be scheduled at a time that is most convenient for you. Once you have completed the interview I will provide a summary of the interview which will take approximately 10-15 minutes to read and give you feedback via email. There will be no compensation for participating in the study.

Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please contact me.

Thank you.

Sincerely,
Brandy Jones

Appendix E: Interview Protocol

The following script will be followed during the interview

Hello (Name), this is Brandy Jones.

Thank you for agreeing to meet with me today. Your participation in my study to explore how, **Principals/Academic Coaches/Third grade teachers** use students' assessments for data-driven decision making. At this point I would like to ask your permission to digitally audio record this interview. The interview should last between 30 to 45 minutes. Your participation is voluntary...I would like to review the ethical background and information concerning the interview.

As you read in the "informed consent form," your confidentiality is a major priority. Your identity and the school where you are employed will remain confidential. Any details that might identify you or your school will not be included in the final dissertation. Your personal information will not be used for any purposes outside of this study. Please note that you can exit the study at any time.

The interview will last approximately 30 to 45 minutes. The interview will be digitally audio recorded and I will transcribe and summarize the interviews. I encourage you to be as honest as possible in your responses. The questions will be asked about how you use DDDM in early childhood education, so please answer from that perspective. Are there any questions that you may have before we begin the interview?

For the tape:

Time of Interview:_____ Date of interview:_____ Place:_____

Interviewee:_____

What grade do you currently teach?_____

How many years have you taught at the early childhood level (P-3)?_____

On a scale of 5 to 0, with 5 being extremely knowledgeable and 0 being extremely

unknowledgeable, how familiar are you with DDDM?_____

Interview Questions: Third grade teachers

1. What is your perspective on DDDM and assessment?

2. What types of assessments do you use (e.g. formal, informal) to make DDDM? If you could be specific with the types of formal/informal assessments you use.

3. When do you use assessments for DDDM to plan instruction?

4. How does DDDM impact your instructional planning?

5. What types of Assessments (e.g. formative, summative) are used to make DDDM to identify culturally and linguistically appropriate curriculum materials?

6. What process is used for DDDM (e.g. data meeting, segregating data) in your school?

Interview Questions: Administrators and Academic Coaches

1. What is your perspective on the use of assessments for DDDM?

2. What types of assessments (e.g. formative, summative) are used to make DDDM to identify culturally and linguistically appropriate curriculum materials?

3. When do you use assessments for DDDM to design curriculum?

4. How does DDDM impact curriculum design?

5. What process is used in DDDM (e.g. data meeting, separating data, and academic coaches) in your school?

Appendix F: Review of Questions by Expert Emails

Greetings,

Thank you for agreeing to be my experts on this journey. I have attached the approved Proposal with the research questions and the interview questions. You can find the research question in chapter two and the interview questions are located in the appendices. I look forward to hearing any feedback. Please let me know when you are available via phone conference to discuss any feedback.

Thank you again,
Brandy Jones

Appendix G: Coding Chart

Codes for Research

Initial Codes: RQ1 =18 RQ2 = 20 **Themes: RQ1 = 5 RQ2 = 6**

Research Question	Code	How? (By…) (…to plan for instruction.)
RQ1: How do educators use assessments for DDDM to plan for instruction?	• Instruction • Instructional Practices • Planning • Student assessments data used to identify learning gaps • Analyzed data • Collaborative meeting • Data Meetings • Teaching the standards • Pacing Guide • Lesson plan development • Grade level Planning • Implementing Effective instructional strategies • Variety of Assessments used to plan instruction • Remediation • Extension activities • Differentiated Instruction • Academic Coach feedback • Instructional delivery of curriculum design • Continuous monitoring student data • Individual student needs • Informal assessments • Student Mastery • Guided groups • Individualized instruction • Desegregated/Segregated data process	1. Collaborating with academic coaches, grade-level team members, and administrators 2. Focusing on effective differentiated instructional practices for extension and/or remediation based on individual assessment data 3. Selecting informal, formal, formative, summative, and diagnostic holistic assessments to Identify students' demonstrated knowledge, skills, and dispositions and learning gaps 4. Analyzing desegregated and segregated data for evidence of effective individualized differentiated instructional practices that led to student mastery 5. Involving students as team members within the DDDM system for continuous progress monitoring

Research Question	Code	How? (By…) (…to design curriculum.)
RQ 2: How do educators use assessments for DDDM to design curriculum?	• Curriculum Materials • Classroom Curriculum design • Framework for curriculum design • Reviewing previous school year data • Stakeholders design of curriculum • culturally appropriate materials • linguistically appropriate materials • Diagnostic assessments • Weaknesses of grade level • Strengths of grade level • Formal assessments used for curriculum materials • Summative assessments used for curriculum materials • District level administration	Before = B; During = D; After = A; Continuous = C 1. C – Collaborating with academic coaches, grade-level team members, and administrators 2. C – Reviewing current and new curricular materials and resources with stakeholder groups for cultural and linguistic appropriateness, relevance, and alignment to standards 3. B – Comparing national, state, and district student data by grade level bands to determine strengths and areas for growth 4. B – Accessing results of data collected from students' summative assessments, teachers' anecdotal records, and family's/parents' surveys from previous year 5. B – Creating a campus-wide framework for curriculum alignment by grade level with pacing guides for meeting

		instructional targets for student mastery 6. A – Summarizing quantitative and qualitative data about classroom curriculum materials to determine effectiveness in meeting goals for future planning

Distinct Codes = 20

Research Question	Code
RQ1: How do educators use assessments for DDDM to plan for instruction?	• Instructional Practices • Planning • Student assessments data used to identify learning gaps • Collaborative meeting • Data Meetings • Grade level Planning • Implementing Effective instructional strategies • Variety of Assessments used to plan instruction • Academic Coach feedback • Instructional delivery of curriculum design • Continuous monitoring student data • Desegregated/Segregated data process
RQ 2: How do educators use assessments for DDDM to design curriculum?	• Curriculum Materials • Classroom Curriculum design • Reviewing previous school year data • Weaknesses of grade level • Strengths of grade level • Formal assessments used for curriculum materials • Summative assessments used for curriculum materials

	• District level administration

Refined Codes = 10

Research Question	Code
RQ1: How do educators use assessments for DDDM to plan for instruction?	• Variety of Assessments • Learning gaps • Collaborative meeting • Instructional Strategies • Targeted instruction • Student needs
RQ 2: How do educators use assessments for DDDM to design curriculum?	• District assessments data • Desegregating Data • Segregated data • Classroom Curriculum design