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Examining Teacher Decision Making and Instructional Practice in Data Teams

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Walden University

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Kelly Jo Moffett

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the review committee have been made.

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Walden University
2020

Abstract

Examining Teacher Decision Making and Instructional Practice in Data Teams

by

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MEd, Edinboro University, 2014

MEd, Edinboro University, 2010

BS, Gannon University, 1998

Doctorial Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

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Abstract

Administration in a mid-Atlantic elementary school in the United States mandated implementation of the Data Wise improvement process (DWIP) to address accountability and student achievement concerns. Leaders were unsure if elementary educators used the approved DWIP within their data teams and how the data were used to support instructional practices. The purpose of this bounded qualitative descriptive single case study was to explore teachers' collaboration and planning using DWIP in data teams, teachers' perceptions of the influence of data team participation on their instructional practices, and how teachers demonstrated the use of data in planning for classroom instruction. The data-driven decision-making framework guided this study because data-based decisions may improve instructional practices. Data were collected through semistructured interviews with a purposeful sample of 11 certified teachers with at least 1 years' experience using DWIP, observations of 3 data team meetings, and lesson plan documents. The data were analyzed thematically using open, axial, and descriptive coding strategies. Teachers revealed they discussed student data and collaborated to write grade-wide lessons during team meetings, but they restricted individual classroom planning to small group instruction. These findings led to a white paper providing research-based recommendations, based on the Universal Design for Learning (UDL), on instructional methods and lesson planning. This endeavor may contribute to positive social change when teachers integrate UDL principles in data driven instruction to provide students with more personalized, robust education outcomes, leading to increased college and career readiness.

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Dedication

To my husband, Byron, and my three children, Dylan, Kelsey, and Braydan, I dedicate this project. The unconditional love you gave me was a key component for me to complete this process. I would have never accomplished this project without you. To my parents, who always say “The more you know, the further you will go.” God knew what my heart and mind needed when he gave me each one of you.

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Section 1: The Problem

Despite average class sizes, highly qualified teachers, and a common core curriculum, students' proficiency levels at River Elementary School (RES, pseudonym), remain under 35%, as reported on the State Report Card (2017). With an increased focus on accountability, K–12 educators are challenged to analyze and use student data to inform their instructional practices (Datnow & Hubbard, 2015; Mandinach & Gummer, 2015). The Every Student Succeeds Act (ESSA; 2015) requires public schools to assess students annually for accountability, and funding remains aligned with student scores on the state assessments (Au & Hollar, 2016; Klein, 2016; Saltman, 2016). In 2015, RES, a small urban elementary school, began implementation of the Data Wise improvement process (DWIP) to address accountability mandates and student achievement concerns (District Strategic Plan, 2015).

The Local Problem

Grover County Public School District (GCPSD, pseudonym) leaders are unsure if elementary educators are using the approved DWIP within their data teams/professional learning communities (PLCs) and how the data are used to support instructional practices. The GCPSD strategic plan (available to the public on the district's official website) focuses on several identified challenges to improve student achievement. To address these challenges, the GCPSD established district-wide procedures that embrace (a) emphasizing rigorous literacy instruction, (b) supporting early learning readiness, (c) establishing college and career readiness benchmarks, (d) embracing Data Wise as a

continuous systemic improvement process, and (e) extending specialty programs (District Strategic Plan, 2015).

According to documentation from the beginning of the 2015–2016 school year, a district supervisor provided DWIP professional development (PD) for 1 hour. The PD included examining the school’s data journey, planning the journey ahead, and introducing the eight-step DWIP. With the intention of addressing the DWIP mandate, RES, the study school, created a Data Wise improvement journey to record “being” Data Wise and not “doing” Data Wise (District Strategic Plan, 2015). The study site defined the purpose of the DWIP journey as creating a shared language and medium to guide collective learning to improve literacy instruction. Currently, the school systems do not have evidence of data team success or failure and how the educators use the data to support instructional practices. This study sought to fill the local gap in practice between what improvement research asserts DWIP can make (Schwanenberger & Ahearn, 2013; Strachan, 2015; Valentin, 2014) and the lack of improvement of student outcomes since the implementation of DWIP.

Rationale

The systemic state assessment, which includes Partners for Assessment of Readiness for College and Careers (PARCC) data, according to the State Report Card (2017), showed a need to implement data teams within the professional learning communities district wide. The following GCPSD results indicate the percentage of students who took the PARCC Assessment in the spring of 2015 and 2016 and scored mastery (met expectations) on the reading and English portion Grade 3 at 19.6%, Grade 4

at 20.5%, and Grade 5 at 22.9%, met grade-level expectations (State Report Card, 2017). Based on 2016 PARCC data for Grade 3 at 21.3%, Grade 4 at 21.4%, and Grade 5 at 22.3% met expectations. The PARCC data for mathematics provided similar results. In 2015, Grade 3 was 17.3%, Grade 4 was 14.6%, and Grade 5 was 14.6% of the students met grade-level expectations. In 2016, Grade 3 was 22.1%, Grade 4 was 16.6%, and Grade 5 was 16.9% of students met grade-level expectations. For school years 2015 and 2016, the data indicated, at the elementary level, reading and math scores did not significantly change. Reading scores, during the 2015 and 2016 school years for third grade and fourth grade increased 2–4.8%. However, simultaneously, the fifth-grade reading scores decreased by .6%. In addition, during this period, Grades 3 through 5 demonstrated an increase of 2–4.8% in their math scores. The low student achievements denoted in the data suggest an extensive problem exists in student performance, which depicts a continued need to improve instructional practices.

The administration stated they were interested in “developing and supporting a rigorous curriculum by examining our elementary team’s progress” (personal communication, January 13, 2017). A school principal identified the essential need for the administration team to collect data that would inform instructional changes, determine PD needs, and communicate successes; the principal stated, “What we monitor gets done” (personal communication, January 13, 2017). Currently, the school system does not have data available about the success of data teams changing instructional practices within the school.

Evidence of the Problem from the Professional Literature

The preliminary review of the literature indicated that the implementation of data teams intends to improve teaching, learning, and leadership, but Valentin (2014) stated limited research exists on teacher perspectives of the influence the structure has on instruction. Studies show teachers can learn how to analyze data and learn from the process, but they do not change their instructional practice (Datnow & Hubbard, 2015; Farrell & Marsh, 2016a; Van Gasse, Vanlommel, Vanhoof, & Van Petegem, 2016). Without a change in instructional practice, one cannot anticipate student learning to improve (Mishkind, 2014; Park & Datnow, 2014).

While the attributes and benefits of data teams and their influence on instructional practices are present in the literature (Schwanenberger & Ahearn, 2013), GCPSD has not defined the ways in which data teams are changing their instructional practices. Even though the literature states using a data-based decision-making model, such as a data team cycle, is effective when identifying student needs and instructional practices (Strachan, 2015), the GCPSD school district administration were unsure if teachers are benefiting from the adjusted instructional practices.

The literature regarding collaborative problem solving suggested data teamwork should occur as a collaborative inquiry process (Burns, Pierson, & Reddy, 2014; Kise, 2012). The literature indicated the practice of presenting data without using a problem-solving process is incomplete because teachers may lack the skills needed to understand school assessment data (Chick & Pierce, 2013). In addition, the data alone do not inform or improve practice (Washington, 2015). Teachers, who effectively use data are informed

about the needs of each student and able to effectively plan curricula, differentiate instruction (DI), evaluate teaching, and drive instruction (Datnow, Park, & Kennedy-Lewis, 2013). These skills involve collecting, analyzing, interpreting, and transforming data into action through informed decisions about improving student learning and instructional practices (Park & Datnow, 2014). Data-driven decision-making (DDDM) can enhance instructional practice and attribute to academic improvement.

Ambiguity exists in the research literature concerning teacher perspectives of the influence a data team structure has on personal instruction (Valentin, 2014). Research is necessary to better understand the data teams and instructional practices of GCPSD. The purpose of this bounded qualitative descriptive single case study was to examine three data teams at an elementary school within the GCPSD and determine if elementary educators are using the approved DWIP within their data teams or PLCs and how the data are used to support instructional practices.

Definition of Terms

Adequate yearly progress (AYP): A criterion defined and submitted by each state yearly to the U.S. Department of Education for increasing all student achievement levels towards 100% proficiency in both reading and math (Yell, 2016).

Curriculum-based measurement (CBM): An evidence-based assessment process that uses valid and short measures to monitor students' progress and development (Dennis, Calhoun, Olson, & Williams, 2013).

Data-based decision-making (DDDM): A regular collection, analysis, and function of several types of data from a variety of sources to improve student

achievement; requires teachers to identify students' strengths and weaknesses relating to the learning goals and taking this information into the construction of upcoming instructional designs (Dunn, Airola, Lo, & Garrison, 2013).

Data Wise improvement process: An eight-step process modeled after the Data Wise project at Harvard Graduate School of Education (Boudett, City, & Murnane, 2013).

Equity sticks: Set of wooden sticks (usually popsicle sticks) which has the written name of a student in a class or group. The teacher pulls from the sticks at random to ensure an equal chance of student participation (Chugai, Terenko, & Ogienko, 2017).

Learning systems: Implementation, in a school setting, of curriculum, PD processes, teacher and leadership actions, goals of the school, student engagement and expectations, and collaborative decision-making (Mette & Scribner, 2014).

Learning structures: The school's capacity, program, assembly and delivery of lesson plans, and structures of the team meetings and leadership, which support teaching and learning (Tivnan & Hemphill, 2015).

Significance of the Study

The findings of this study may interest the following stakeholders: school administration, teachers, and students. The administration team may expand their understanding of teacher perceptions of the data teams. This information could benefit school administration because the findings may provide recommendations related directly to the successful implementation of data teams. Furthermore, this research may progress the correlation concerning data teams and instruction at other elementary schools within

the district. Teachers who participate in this study may apply the findings to clarify the strengths and weaknesses of the data teams and adjust their use of data to improve their classroom instruction. Students may benefit when teachers adjust their classroom instruction to improve learning experiences based on their work in a data team. An improvement in classroom instruction based on classroom data could lead to a more nurturing and successful classroom and school culture. The findings of this study may support social change through (a) building a teacher community-based response to data teams, (b) changing teacher behaviors and strategies, and (c) enhancing teacher accountability. A better understanding of the relationship may provide district leaders, administrators, and teachers with insight into effective data teams and improved instructional practices that may lead to higher student achievement.

Research Questions

The purpose of this descriptive case study was to examine three data teams at an elementary school in the GCPSD to determine if elementary educators are using the approved DWIP within their data teams/PLCs and how the data are used to support instructional practices. At the study school, the application of various instructional strategies led to little effect on the chronic low achievement scores; therefore, an exploration of data teams and instructional practices led to best practices, which can be shared with the school system and other school communities.

The findings allowed for the enhancement of data teams through a white paper that offers recommendation that focus on best practices for teachers. The research questions guiding this research were used to examine the data team and instructional

practices of GCPSD. The following research questions focused on determining if elementary teachers are using the data team approach and how the data are influencing classroom teachers' instructional practices:

RQ1: How does a data team collaborate and plan for data use during team meetings?

RQ2: How do elementary classroom teachers perceive the influence of data team participation on their instructional practices?

RQ3: How do teachers demonstrate their use of student data in planning instruction?

Review of the Literature

The literature review begins with a description of DDDM, the conceptual framework, used to analyze and interpret findings for this study. The conceptual framework is preceded by a review of the literature correlated to data teams and is thematically organized into the following topics: *educational reform, DWIP, collaborative leadership and DI, educational reform, DWIP and collaborative leadership, and DI*. The scholarly literature begins with higher-level concepts and broad implications and then focuses on specific studies and critical analyses.

The strategy used to gather literature to inform this study involved examining books, peer-reviewed journal articles, and publication links on websites, which inform DDDM practices. The primary sources of literature were peer-reviewed articles from the Walden University library. I used several databases to complete the literature review: Academic Search Complete, ERIC, ProQuest, and SAGE Research Complete. To reach

saturation in the literature review, I consulted a Walden librarian for key terms that included: *database decision-making*, *data-driven reform*, *collaborative inquiry*, *DI*, and *educational systems change*. I also reviewed the abstracts of the chosen literature to narrow the scope by choosing the most applicable to the research questions.

Conceptual Framework

This study was grounded in the prior research related to effective data team practices and their influence on classroom instruction. The study was designed around the premise that educators must integrate the use of data and the analytical processes of interpretation for DDDM (Faria, Greenberg, Meakin, Bichay, & Heppen, 2014). In this study, I investigated if elementary educators were using the approved DWIP, which is an eight-step DDDM process.

The models and theories of action for DDDM found in the literature are built on Ackoff's (1989) ideas. Ackoff (1989) stated that data have no value until transformed into a useful form. This transformation involves three levels of hierarchy: (a) information (b) knowledge, and (c) wisdom (Aven, 2013; Baskarada & Koronios, 2013). At the information level, data are used simply to create descriptions with statistical techniques. In this study, I investigated how elementary teachers are using the data team approach.

Knowledge and understanding occur when humans contemplate if the information relates to organizational systems to learn and adapt for greater efficiency (Aven, 2013; Baskarada & Koronios, 2013). Researchers have stated that understanding is differentiated from knowledge based on how systematic the learning and adaptation process is (Aven, 2013; Baskarada & Koronios, 2013). Information, knowledge, and

understanding are based on the efficiency of systems, but wisdom is based on effectiveness. The application of values and judgment then characterizes wisdom. Wisdom is most likely to guide future actions including lesson planning.

Several researchers have expanded on Ackoff's model and included the data, information, and knowledge elements of his model. Mandinach et al.'s (2008) model involves wisdom translating knowledge into an implemented decision, which is followed by an assessment of its impact. This assessment provides feedback to the previous steps in the process and allows for enhanced knowledge leading to an informed decision.

Effective data use was further developed by several researchers. Marsh and Farrell (2015) expanded on the Mandinach et al. (2008) model to accentuate the different characteristics of the practice and the significance of collaboration for effective data usage. Classroom teachers are considered decision makers who use classroom data to assess the performance and progress of students, but teachers can also use data to reflect on their instructional practices (Gill, Borden, & Hallgren, 2014). Exploring teachers' perceptions of data use and how their decisions affect student learning may inform this process as a component of quality improvement (Lewis, C. 2015; Park, Hironaka, Carver, & Nordstrum, 2013). The purpose of this descriptive case study was to examine three data teams at an elementary school in the GCPSD to determine if elementary educators were using the approved DWIP within their data teams/PLCs and how the data are used to support instructional practices.

Effective data use requires collaboration and sound leadership (Datnow et al., 2013). Teachers must be capable of sharing and discussing their students' outcomes with

students, teachers, and parents. Teachers are therefore called to collaborate on data usage to advance student learning and the school overall. The school needs to build a capacity to lead through collaborative work and leadership teachings from comprehensive school reforms.

Literature on DDDM showed an evolving description of data and DDDM. First, scholars used the teams' information, evidence, and data to define what they are applying to enlighten decisions. Arinder (2016) stated evidence is not an alternative expression for data or information. Marsh and Farrell (2015) described DDDM as educational shareholders systematically gathering and examining data to direct decisions aimed at increasing learner success and advancing the school.

Moreover, the procedure of DDDM was aligned with organizational learning. Dunn et al. (2013) stated the DDDM process includes the organizational shareholders searching for the data, employing the information for analysis, and producing results for an organization centered on information. Collectively, these researchers agree on the collaborative process, which applies data in making informed decisions. The DDDM process, to which the research alludes, equals a procedure of data examination through collaborative analysis used by the school districts researched. This emphasizes the importance of determining if elementary educators are using the approved DWIP within their data teams/PLCs and how the data are influencing classroom teachers' instructional practices.

The plausible connection among the main components of a DDDM framework comprises of motivation to use the data, effects on how teachers use data, and the actual

process applied in analyzing data, which leads to specific actionable outcomes. The DDDM framework relates to the approach and research questions of this study. The DDDM framework becomes meaningful when combined with effective action to create change in instructional practices (Fenton & Murphy, 2013). Within the process of the framework, data are shared with teachers during data team meetings. The teachers synthesize this information into their own conclusions, which are formed by their pedagogical experiences and instructional style (Light, Wexler, & Henize, 2004).

The framework provides the foundation for determining if elementary educators are using the approved DWIP within their data team meetings. Furthermore, in this study, I investigated (a) how data teams collaborate and plan for data use during a meeting, (b) how elementary classroom teachers perceive the influence of data team participation on their instructional practices, and (c) how elementary teachers demonstrate their use of student data in planning for instruction within the school being studied.

Review of Current Literature

Educational reform. Education reform movements have had a substantial impact on school districts and schools in the United States. Data-based reform efforts are seeing a global focus, with countries such as England, Canada, and the Netherlands grasping at the potential of data-focused reform (Downey & Kelly, 2013; Earl & Louis, 2013; Eddy-Spicer, 2017). Worldwide, schools are being held responsible for their students' education and student assessment data is the measuring component.

In the United States, the No Child Left Behind Act (NCLB) represents the highpoint of this historical development and led to DDDM originating in the United

States (Kleij, Vermeulen, Schildkamp, & Eggen, 2015; Wayman, Spikes, & Volonnino, 2013). The 2001 NCLB is associated with being a testing mandate, which schools and school districts are required to conduct. Individual states are required to construct, administer, and establish passing standards of the tests. The federal government requires administration of a standardized test in mathematics, science, and reading. States are mandated to test all students in mathematics and reading. These tests must occur annually in Grades 3 through 8 and once during Grades 10–12. States are mandated to test every student in science, at least once, within three-grade spans (Grades 3–5, 6–9, and 10–12; Klein, 2016). The federal government established the standardized testing and reporting mandates to hold schools accountable for student achievement and learning regardless of race, ethnicity, poverty, limited English proficiency, or disability (Hersperger, Slate, & Edmonson, 2013).

On December 10, 2015, President Obama signed ESSA, which replaced the NCLB as our nation’s primary education law (ESSA, 2015). The ESSA was an attempt to address shortcomings of the NCLB Act, by allowing states to have greater flexibility and control over their system of assessments and increasing state schools funding (Senate Committee on Health, Education, Labor, & Pension, 2015). One notable aspect of this bill is it encourages schools to employ comprehensive measures, both academically and nonacademically, to inform administrative decisions about the school’s quality.

The ESSA promotes evidence-based measures (an activity, strategy, or intervention), which improve the school system (Office of the Press Secretary [OPS], 2015). ESSA provides a way for states to update their current assessment systems and

move away from the NCLB's standardized mandates (OPS, 2015; The White House, Office of the Press Secretary, 2015). ESSA progresses the Elementary and Secondary Education Act by the promise of ensuring that all students from prekindergarten to postsecondary have an education that equips them for life, career, or college (ESSA, 2015). ESSA stressed the importance of decreasing the amount of instructional time given to standardized testing and added the nonacademic components to the school measures.

ESSA mandates that every state includes several measures of student achievement that includes (a) academic performance determined by proficiency on reading and math assessments, (b) academic progress for students, (c) increase graduation rates, (d) development of English Language Learners (ELL) proficiency, and (e) at least one nonacademic indicator of the School Quality or Student Success (SQSS). Some of the ESSA nonacademic components include (a) climate and safety, (b) student or educator engagement, (c) access to advanced coursework, and (d) postsecondary readiness (Hough, Penner, Witte & Policy Analysis for California Education, 2016). This change has the potential to reduce knowledge gaps by understanding how contextual factors can shape learning. Moreover, the additional school data provides state and local administrators with the opportunity to use data to support evidence-based programs for school, teacher, and student improvements.

The impact of using data through a collaborative inquiry amongst administrators and teachers was further examined. Marsh and Farrell (2015) established that employing data collaboratively definitely influenced tutors to maintain an incessant development

process. Fullan and Quinn (2016) suggested that collaborative practice involves the administrators and teachers taking data ownership. The members in their research specified that team method had affected people and inspired positive reform in schools. Therefore, this study determined if elementary educators are using the approved DWIP within their data teams and if the data are influencing their instructional practices.

Data Wise improvement process. The Data Wise Project, a recent research study led by Kathryn Boudett, Elizabeth City, and Richard Murnane in 2013, at Harvard Graduate School of Education, has influenced school-based data teams. The result of the Data Wise project, the DWIP was developed. The GCPS requires implementation of the DWIP as part of their school reform efforts.

In the DWIP Project, team members worked with the Boston Public School system, with a focus on promoting collaborative inquiry among teams of teachers using classroom and school data to guide school improvement efforts. Their eight-step improvement process follows a recursive practice that is comprised of (a) preparing for collaborative work, (b) establishing an assessment literacy, (c) forming an overview of data, (d) digging deeper into student data, (e) examining instructional practices, (f) developing a team action plan, (g) planning for assessing progress, and (h) continuing to act and assess the plan (Boudett et al., 2013; Lockwood, Dillman, & Boudett, 2017). The team chose not to focus on the configuration and organization of data teams; instead, the focus was on how the collaborative process should ideally function. The authors asserted that for a data team to be effective, school leaders must create a culture that has a shared emphasis on a commitment to action, intentional collaboration, and reliance on evidence

within the established cultural norms of the teams (Boudett & City, 2014; Lockwood et al., 2017).

Instructional leadership. Instructional leadership involves transferring authority, including others in the critical decisions in order to pose vital questions, and developing an atmosphere where teachers learn and grow (Marsh & Farrell, 2015). Democratic leadership standards are based on individuals input and attain commitment through collaboration and participation. According to Marsh and Farrell (2015), the top leaders are democratic and transformational.

Transformational leader has been defined as a leader-follower association that advances both to better and a new level (Marsh and Farrell, 2015). This particular dynamic moral method of leadership usually works with tutors, as coworkers working collaboratively in decision-making. The democratic, collaborative, and transformational leaders are suitable for the conceptual model for this research to bring change with the collaborative data analysis.

Leadership is a key factor in school culture and expectations for collaboration and data use (Datnow et al., 2013). Datnow et al. (2013) identified leadership, among other variables, that support or constrain teachers' collaborative data use. The authors concluded that supportive variables included structured collaboration time with an agenda of changes to instructional practices, leadership that focuses on thoughtful data use, DDDM as a shared responsibility, norms for data discussions, data discussion protocols, and defined teacher teams (Datnow et al., 2013). The literature indicated that building

principals have a significant role in developing and maintaining positive data cultures within their schools (Mandinach & Gummer, 2013; Park, Daly, & Guerra, 2013).

Strong and effective leaders are essential to the data teams or learning community process. Effective leadership in a collaborative culture with shared beliefs is directly linked to successful data teams or learning groups (Buttram & Farley-Ripple, 2016; Carpenter, 2015). Leaders may increase their learning community/data team success rate by holding staff accountable, addressing individuals who resist the process, finding out why teachers are disengaged, and ensuring that teachers have a voice in the learning community/data team process, as this may increase staff participation (DuFour & Mattos, 2013). Gray and Summers (2015) stated the effectiveness of learning groups or data teams depends on the trust between the school faculty and between the faculty and school leaders.

Furthermore, school leaders must understand the complexity of promoting individual and group learning to support teacher PD and the levels of critical reflection that go beyond traditional collaboration efforts (Owen, 2014). Ermeling and Gaillimore (2013) stated that creating a learning place, in the school, for teachers and students was something in which schools and districts have shown an interest. In the 40 districts the authors visited, the learning communities fell into one of two groups, compliance driven and workshop driven.

Districts with effective and engaged school leaders have a higher likelihood of experiencing success with the implementation of data teams and improve teaching, student learning, and professional practices (Horton & Martin, 2013). These leaders

empower their teachers to embrace the challenge of working with student data and as a result, transformational leaders are successful in schools that are low performing (Kokemuller, 2014). Principals should hold faculty accountable for their actions and celebrate teacher success by making staff members aware that the data team efforts are making a change in teaching and learning while simultaneously improving the school culture (Horton & Martin, 2013).

The data team or learning community process is most productive for schools that focus on student learning, increase capacity, collaboration, reciprocal learning, and staff accountability with a shared and distributed leadership style (DuFour & Mattos, 2013; McConnell, Parker, Eberhardt, Koehler, & Lundeberg, 2013). Moreover, school leadership literature suggests that positive effects on teachers' use of data can occur with a transformational leadership style (Stump, Zlatking-Troitschanskaia, & Mater, 2016). Leaders who actively support DDDM provide teachers with benefits and supports not found in schools that do not foster DDDM. These findings indicate determining how elementary teachers are using the data team approach and the value of data teams to educators and schools.

Teacher leadership. Teacher leadership often requires one to balance the skills of both leadership and teaching, knowing when to shift each role can be challenging (Jacobs, Gordon, & Solis, 2016). Leadership skills for change and sustainability can foster three components of educational leadership: working within the educational systems, working with people, and working for change (Ferreira, Ryan, & Davis, 2015). Ferreira et al. (2015) explains that working with the educational system refers to the

knowledge of knowing the systems within the program and its relationship to policies, stakeholders, and knowing the differences with each component. Working with people, requires the ability to work collaboratively within the group setting and establish the capacity for change. Working for change is described as the ability to improve strategic planning, evaluation of planning, and collaboration to allow change to occur (Ferreira et al., 2015).

Teachers who are leaders have been considered to be active in data teams/PLCs and hold high levels of self-competence (Nudrat & Akhtar, 2014). Nudrat and Akhtar (2014) noted that teacher leadership can develop teacher's level of efficacy and can offer opportunities to develop beyond the teaching role. A teacher's self-efficacy is the belief that a teacher can bring about change in his/her students (De Neve, Devos, & Tuytens, 2015). Teacher leaders, teach their students, but they mentor and support colleagues, advocate for change, and advise new teachers (Jacobs et al., 2016). Szczesiul and Huizenga (2014) described teacher leadership as a process of individual and collective influence that is theorized by many researchers to be the critical bridge between organizational structures and teacher.

Recent research showed that teachers who considered themselves to be leaders look for ongoing and new research to share, provide development opportunities to peers, are ongoing learners, share ideas, and participate in professional relationships with their colleagues (Jacobs et al., 2016). Teacher leadership characteristics are being sensitive to the needs of others, are flexible, risk takers, positive, vision driven, have strong interpersonal skills, are innovative, have a strong efficacy in the work that is done, and

build a sense of community among teachers (Nudrat & Akhtar, 2014; Jacobs et al., 2016; Szczesiul & Huizenga, 2015). Increasing requirements and accountability required teachers to strengthen their data efficacy (Szczesiul & Huizenga, 2014).

Teacher collaboration. One strategy showing success with supporting teachers' data efficacy is the development of collaborative data teams within schools (Schildkamp & Poortman, 2015). A study conducted by Voelkel and Chrispeels (2017) used the structural equation modeling to investigate the connection between data teams and teachers' collective efficacy. The study included 310 surveys from 16 schools within one district that implemented PLCs thoroughly. The results indicated that higher performing PLCs predict teacher efficacy at a higher level. Voelkel and Chrispeels (2017) study showed that involving and supporting teachers in collaborative data teams within the PLC can heighten teacher efficacy, and can promote improved teaching practices and student achievement.

A study conducted by Farrell and Marsh (2016b) used a comparative study to investigate the patterns within responses by teachers. The participants included teacher, coaches, and school leaders that worked at one of the five middle schools within three United States school districts to investigate the conditions in relation to the various instructional responses to data. The data collection included 73 school level interviews, six focus groups (including 24 teachers), and 20 meetings or district trainings associated to data. The study found, among the majority of cases, that teachers responded to data but did not change the delivery of their instructional practices. There were three distinct and separate sets of conditions that correlated to the outcome (a) the presence of external data

without any internal data, (b) teachers independently working, and (c) the presence of a data culture that is compliance-oriented.

Teacher learning is an essential component of collaboration. Current literature suggests that educators do not possess the skills needed to embrace and implement data use initiatives generated from these legislative policies at the time they were enacted (Kereluik, Mishra, Fahnoe, & Terry, 2013; Mandinach & Gummer, 2013). An ideal system, collaboration, that aids in learning about assessments, analyze assessment data, strategize next steps, and determine instructional strategies based on student data. Research has supported using collaborative data teams within individual schools to help teachers to become more data literate (Marsh, Bertrand, & Huguette, 2015; Schildkamp & Poortman, 2015).

Dialogue within data teams was key to promoting change in how instruction is delivered (Marsh et al., 2015). The research indicates that dialogue among the team members and team interactions are an essential component of successful data teams; therefore, this study focused on defining if elementary teachers are using the data team approach and how the data are influencing elementary teachers' instructional practices.

Teachers beliefs. Teachers' beliefs, values, and prior knowledge affect the ways that teachers interpret and act upon student data (Bertrand & Marsh, 2015; Box, Skoog, & Dabbs, 2015). Katz and Dack (2014) concluded that analyzing data requires thinking, and thinking is a human activity affected by external and internal factors. Teachers reflections on data can lead to a deconstruction of previously developed beliefs that

prompt teachers to acquire different ways of acting on data (Korbin, 2016; Ronsen & Smith, 2013).

Teachers' personal beliefs and experiences influence their data use (Bertrand & Marsh, 2015; Box et al., 2015). Research conducted by Jimerson (2014) explored teachers' beliefs about data usage. Her study concentrated on how teachers develop their thinking about data rather than which processes to use or which data to examine. Jimerson (2014) discovered that external factors such as accountability demands, leadership data usage, and formal professional learning all influence how teachers' understand data.

Further research explored the mental models for data use by teachers (Jimmerson, 2014). She sorted survey responses into four categories that shape teacher beliefs regarding data-use. The four categories of teacher beliefs about data come from formal training, modeling by school leaders, social interactions with other teachers, and personal experiences. Teachers described the sources of formal training on data use as conferences, district or school-level workshop, and graduate school courses. Teachers shared that data-use support came from instructional coaches, specialist, or building level administrators.

Researchers concluded that teachers' personal experiences with data contribute to their beliefs about data use to improve instructional practices (Svinicki, Williams, Rackley, Sanders, and Pine, 2016). Teachers who believe student data is useful in improving instructional practices are more likely to report reflecting on their data, and report feeling ready to learn complex data use processes (Svinicki et al., 2016). Teachers

beliefs regarding uses of student data affect how they interact with data systems, their thoughts on assessment validity and alignment, as well as their perceptions regarding accountability and data use (Babo, Tienken, & Gencarelli, 2014; Horn, Kane, & Wilson, 2015). Teachers' perceptions have the potential to affect instruction the most (Bertrand & Marsh, 2015; Slavin, Nelson, & Deuel, 2013).

Teachers' use of data. Teachers can use data to recognize their strengths and weaknesses in teaching (Fox, 2013; Wieman, 2014). The usage of assessment data to inform instructional practices has become an important component of teaching and learning (Hoover & Abrams, 2013). In the state, where I conducted this study, the use of school-level data from supplement assessments, benchmark assessments, student portfolios, and other local data measure student growth (Collins & Amrein-Beardsley, 2014).

Several common methods in which teachers use data from assessments, including posting and sharing data as a focal point for establishing learning goals, differentiating instruction, lesson planning, and creating Response to Intervention (RTI) plans (Marsh et al., 2015). Candal (2016) stated that sharing information with individual students about personal performance on tests is a student-centered way to use data. Candal (2016) recommended that schools adopt the data-driven instructional practices of the charter school in his study, which posted student data and shared that information with students. Marsh et al. (2015) recommended that teachers react to data by re-teaching topics and by providing students with extra supports outside of the classroom, after the students have learned the material. Research conducted by Abrams, Varier, and Jackson (2016) noted

that teachers may use data to narrowly focus on students who are close to passing and direct remediation efforts towards them only. Another common response used by teachers is having students self-reflect on their own results (Candal, 2016; Marsh et al., 2015). Abrams et al. (2016) suggested that students should be taught to set learning goals and data should be a part of a continuous cycle of instructional improvement.

Success and failures of data teams. Successful data teams/PLCs allow teachers time to interact with colleagues in a meaningful way and supports professional growth (Choi Fung Tam, 2015). Choi Fung Tam (2015) discovered that teachers who were given job-embedded collaboration time within a data team, they felt empowered to increase capacity and make instructional improvements. Teachers expressed their appreciation for the allotted time to plan together, share their views, learn from one another, and problem-solve (Choi Fung Tam, 2015). Williams (2013) stated successful data teams/PLCs include learning opportunities based on school data with an emphasis on curriculum, instruction, and student learning.

When a data team/PLC uses a mixed approach to support teachers' contribution on an anecdotal and relationship level, along with the data as the grounded framework for professional growth, the outcomes can dramatically increase (Pirtle & Tobia, 2014; Riojas-Cortez, Alanis, & Flores, 2013). Gerdes and Jefferson (2015) stated that there should be a planned sequence to the formatting of a data team/PLC. These authors recommended having a beginning session that pertains to building participant relationships, setting expectations, and getting to know the needs of the group. Sims and Penny (2015) concluded that some critical aspects of data team/PLC success include a

positive culture of learning with an open mindset, a collaborative spirit, opportunities for questions, reflect and apply, use of relevant data, content knowledge, accountability, and sustainability (Sims & Penny, 2015). Some successful outcomes of data teams/PLCs are the development of leadership skills among the teachers, a strong trust in the programmatic structure, and larger teacher support (Ho, Lee, & Teng, 2016). Some data teams/PLCs have positive influences on the development of staff and increase outcomes for students; however, some programs are failing to produce similar results due to the lack of foundational aspects and the sessions tend to not be teacher/learner focused (Sims & Penny, 2015).

A recent research study found that the implementation of PLCs in one public school was limited and therefore did not influence student achievement (Sims & Penny, 2015). Their qualitative case study investigated the perceptions of teachers who participated in the PLC, also known as “data teams” (Sims & Penny, 2015). Their study investigated teachers’ perceptions of the PLC and how teaching, lesson planning, and use of time were impacted. Sims and Penny (2015) stated that a data team/PLC might be ineffective for several reasons (a) internally in regard to collaboration and (b) externally involving environment and circumstances. A deficiency of the PLC group studied by Sims and Penny was their limited mission and definition of data teams. Thus, the perceptions of the teachers, that participated in the PLC only used a single set of data. The teachers were deficient in time, collaboration, and support needed to be efficient in their data team/PLC. Research conducted by Fitzgerald and Theilheimer (2013) found that teachers are frequently advocates for problem solving, teamwork, and friendship

amongst the students in the classroom; however, the expectation to work with an adult group can be seen as a significant burden and stressful.

Differentiated instruction. DI is necessary for today's classroom. DI is an approach used to bridge the learning gap and meet the individual learning needs of students based on levels of student readiness, capabilities, interests, learning styles, and student data (Nicolae, 2014; Puzio, Newcomer, & Goff, 2015). Dixon, Yssel, McConnell, and Harding (2014) stated that DI is a philosophy that causes teachers to think about teaching, and that this instructional approach focuses on what each student needs in order to achieve academically. Differentiation transpires when teachers use analytical assessment data to adjust the content, process used to teach, product, and the learning environment (Tomlinson, 2014).

Additionally, DI has been defined as teachers using assessment data to make informed classroom decisions (Palkovich, 2015). Additionally, Gissel (2014) stated that teachers use assessment data and DI to create flexible groups and teach at the students' zone of proximal development (ZPD). Tomlinson (2014) expanded on the definition of DI as a philosophy of teaching constructed on the notion optimal student learning occurs when their teacher takes into consideration their differences in readiness levels, interest, and learning profiles.

Studies on DI focuses on the correlation between student understanding and their likelihood to participate in a classroom setting that uses DI (Faulk & Faulk, 2013). The impact of DI on students' learning is so profound students, who were once labeled introverted and shy, began to participate in DI lessons by speaking out and providing

correct answers to questions posed by the teacher (Faulk & Faulk, 2013). Morgan (2014) found individualized instruction, a common aspect of DI, helped a child succeed academically when the child was having difficulty learning mathematics. Morgan (2014) noted the child was not responsive to instruction provided by the mathematics teacher. The child was able to excel in the subject once the teacher incorporated DI into the mathematics lesson.

In the DI classroom, teachers use small groups to teach students based on their learning style (Getha-Eby, Beery, Xu & O'Brien, 2014). Students explore new concepts, while teachers facilitate their learning with constructive guidance (Pritchard, 2013). Connor, Spencer, Day, Giuliani, Ingebrand, McLean and Morrison (2014) stated cooperative learning groups allowed for the teachers to work with students' individual need. Connor et al. (2014) noted significant predictions for future learning can be made based on the interactions during instructional time and the type of learning formats students receive. Students are able to make progress through choices because the brain processes knowledge in different ways (Coulson & Harvey, 2013). A teacher, who only considers the students' ZPD when instructing, learning may not be retained due to the student not being intrinsically engaged (Flake, Barron, Hulleman, McCoach, & Welsh, 2015). An essential part of the DI framework is continually monitoring the students' learning throughout the instructional process (York-Barr, Sommers, Ghore, & Montie, 2016).

Implications

I anticipated gaining pertinent knowledge about how data teams collaborate, and plans for data use during meetings, teachers' perceptions of the influence of data team participation on instructional practices, and use of student data in planning for instruction. The data collection and analysis may show barriers to implementing data teams or teacher concerns with using student data to inform their choice of an appropriate instructional strategy. Understanding potential gaps between the expected and actual perceptions of teachers may provide insight into creating more effective data teams. The findings of the study may inform district leaders, teachers, and instructional coaches of the DWIP practices and supports that address the needs of data team members.

This study may affect students if elementary educators are using the approved DWIP to influence their instructional practices. The findings of the research could benefit current students by providing teachers with the skills needed to use data to influence their instructional practices. By answering the research questions, teachers, school leaders, and district administrators would better understand teachers' perceptions of the influence data teams have on classroom instructional practices. I shared the results of this study with stakeholders and participants by providing a two-page summary of the findings.

This research study included developing a white paper to address teachers' needs. The findings of the research would determine the content and focus of a white paper project. Recommendations included in the project research-based instructional framework and strategies. Each of the possibilities could enhance teaching and student learning. This study could support social change through building a teacher community-

based response to data teams, changing teacher behaviors and strategies, and enhancing teacher accountability. A better understanding of the relationship may provide district leaders, administrators, and teachers with insight into effective data teams and improved instructional practices that may lead to higher student achievement. The resultant positive social change for this project study may include potential increases in student outcomes within the College and Career Readiness Standards, a rise in graduation rates, and an increase in social and educational status for all students by being career or college ready.

Summary

The problem focus is despite a local policy on data teams; the GCPSD does not know if elementary educators are using the approved DWIP approach within data teams/PLCs and how the data are used to support instructional practices. A review of the literature suggested that, although data teams positively influence instructional practices, not all teachers that participate in data teams use student data to inform their instructional practices. The relationships between data team members and their instructional practices deserve additional attention from scholars and practitioners. The student achievement data reported by the state and district provided support that the problem occurs beyond the local environment. Improving instructional practices, through a collaborative data team approach, has extensive implications for students because students will be well prepared for college or the workforce.

A bounded qualitative descriptive single case study was employed to determine if elementary educators are using the approved DWIP within their data teams and how the data are used to support their instructional practices. A focus for this study was on how

three data teams interacted and planned for data use during meetings, as well as the influence of data teams on teaching and learning. The investigation involved gathering and understanding the perspectives of teachers regarding the data team process. The study could enhance the actions of teachers following data team meetings by examining how teachers demonstrate their use of student data in planning for instruction. Section 2 introduces the case study, the participants, and the instruments that were used to collect data.

Section 2: The Methodology

Research Design and Approach

This qualitative descriptive case study served as a platform to address the local problem that the GCPSD was unsure if elementary educators were using the approved DWIP within their data teams/PLCs and how the data are used to support instructional practices. One purpose of this study was to explore teacher perceptions of the influence of data team participation on their instructional practices. I pursued a deeper understanding of how a data team collaborates and plans for data use during team meetings. Additionally, I documented how elementary teachers demonstrate their use of student data in planning for instruction within RES.

A bounded descriptive single case study is suggested for a researcher who desires to gain knowledge about the meaning participants ascribe to experiences (Bernard, 2013) and provide clarity and descriptions (Yin, 2014). The qualitative approach enables researchers to offer decisive and rational suggestions of the collected information to understand an occurrence (Aborisade, 2013). In qualitative research, the researcher strives to provide insight into how experiences come about in a natural setting rather than what caused the experience (Creswell, 2014).

The qualitative design of the research questions for this study meant that a qualitative approach was appropriate. The research questions that determined the design, methodology, and scope of the study asked (a) how teachers collaborate and plan for data use during meetings, (b) how elementary classroom teachers perceive the influence of data team participation on their instructional practices, and (c) how teachers demonstrate

their use of student data in planning for instruction within the school being studied. To answer the research questions, detailed, in-depth data were collected through conducting semistructured interviews and observing three data team meetings to gain insight into teachers' perceptions of data teams. I collected and analyzed lesson plans to show evidence of how teachers use student data in planning for instruction. Yin (2014) stated that a descriptive single case study is the appropriate methodology to use when questions begin with *how* or *why*, and the study focus includes current actions. Researchers can establish emerging themes depending on the participant's conduct and responses (Manhas & Oberle, 2015). In this descriptive single case study, I interviewed the participants to examine the perceptions of elementary teachers who are members of a data team within one school.

This study focused on describing and explaining the individual data team experiences and how the experiences relate to classroom instruction; therefore, a qualitative approach was appropriate to understand the participants' perceptions. The supplementary data collection methods included observing three data team meetings and reviewing classroom teachers' lesson plans. This qualitative study drew on a conceptual framework providing direction for the study (Green, 2015).

A quantitative approach was not appropriate because the research did not focus on relationships, and the data were not numerical (Breen, Holm, & Karlson, 2014). Quantitative researchers generate a hypothesis to test a statistical significance that proves or disproves the end results of the research study (Ebinger & Richter, 2015). The process of a qualitative research study focuses on individuals and their experiences and involves

selecting questions to ask study participants (Cummings, Bridgman, & Brown, 2016).

Thus a quantitative study included several processes that did not align with this study.

Researchers have identified and described several types of designs for qualitative research, including a descriptive case study and ethnography research (Roberts, 2013).

An ethnographic research design is most appropriate when a researcher studies people or cultural groups. Ethnography explores phenomena from the subject (Cruz & Higginbottom, 2013) over an extended period (Abdulrehman, 2015). Ethnography was not appropriate for this study because I collected data from the participants without full immersion into my research site, and the research was not focused on a group of people or cultures.

A phenomenological research study is an explanatory, structured approach requiring the researcher to seek clusters of meanings in the data (Gill, 2014). The phenomenological researcher reports an understanding of the lived experiences of participants. The characteristics of a phenomenological study made this method inappropriate for this study, as the design involved the integration of the researchers' and participants' shared interpretations by exploring individuals' emotional reactions (Tuohy, Cooney, Dowling, Murphy, & Sixsmith, 2013).

The narrative theory is a unique research approach that depends on researchers' narrative of collected data from the participants constructed of their personal experiences and told experiences (Wexler et al., 2014). Depperman (2013) noted that the information in a narrative design could be biased but constructive when building a chronological story

of the participants' lives. This is not the intent of this study; therefore, a narrative design was not appropriate for my study.

There are multiple qualitative research designs, and I selected a bounded qualitative descriptive single case study design because I wanted to investigate participants in their social setting for a specific length of time. I was interested in their experiences and perspectives. Descriptive single case study designs are conducted by researchers when investigating and describing occurrences over a period within the natural environment of the participants (Lewis, S., 2015). A descriptive single case study design offers researchers the ability to attain an understanding of a problem in research by investigating how and why questions (Lalor et al., 2013).

For this study, the interview procedures allowed for an investigation of the perceptions of the participants and relied on in-depth, detailed responses from the semistructured interview questions. The observation of three data team meetings allowed data collection to occur on how teachers interact and plan for data use during meetings. The lesson plan review provided insight into how teachers demonstrate their use of student data in planning for instruction within the school being studied. Based on the research questions, a bounded qualitative descriptive single case study design was the most appropriate for my study.

Participants

Criteria for participant selection. Participants in this study were elementary educators who teach in Grades PreK–5. Because the participants were selected based on their knowledge of the subject matter, I used a purposeful sampling strategy (Lodico,

Spaulding, & Voegtle, 2010). Educators participating in this study were derived from a purposeful sampling based on their experiences with DDDM and data team meetings. Teachers without or with limited experience with DDDM and data team meetings were not selected for this study.

The educators at RES participate in weekly data team meetings that focus on various topics and plan activities and update staff on assessment information. I invited teachers to participate by e-mailing them an invitation to participate. The criteria for participant selection included: (a) possession of a standard teaching certificate, (b) employment by the RES school of study for a minimum of 1 school year, and (c) participation in the data team process for a minimum of 1 school year. The 11 selected teachers were from different departments and/or grade levels at RES and had various years of work experience as a teacher. Choosing participants from various departments and/or grade levels permitted me to collect data from multiple perspectives, thus adding to the validity of this research. Demographic information for participants is presented in Table 1.

Insight into elementary school teacher perceptions of data teams was gathered through collecting and analyzing data from elementary teachers who serve in a variety of roles within the school and are involved in the data team meetings. Elementary teachers at RES, who serve students in Grades PreK–5 were asked to volunteer for this study. I collected data from 11 participants who served in different roles, which allowed data to be analyzed from multiple perspectives. A total of 11 participants was adequate and appropriate for the study because the ability to gain a more intense level of understanding

requires fewer participants through sufficient data to create themes (Yin, 2013). Fusch and Ness (2015) determined that although interviews were a method for reaching sufficient data, no specific number of interviews is needed to do so. Focusing on the rich and thick data gathered from the interviews, observations, and lesson plan reviews were more important than increasing the sample size (Fusch & Ness, 2015).

Table 1

Teacher Experience Demographics

1–5 years	6–10 years	11–20 years	More than 20 years
E2	E1	E4	E5
	E3	E8	E7
	E6	E9	
	E10		
	E11		

Procedures for gaining access. The study occurred in an elementary school setting. I followed the procedures set forth by the school district to gain approval to conduct my research study. I requested permission to complete the research by submitting an application to the institutional review board (IRB) at Walden University. Additionally, an IRB application was completed and presented to the school district's research department to request approval to conduct the study. Following approval to begin my research, I arranged a conference with the administrators at RES to explain the purpose and details of my study. The 11 participants were selected based on their interest to participate and their familiarity with the data team process. The e-mail sent to potential participants comprised of the purpose of the study, participant expectations (i.e., anticipated length of interview sessions), ethical considerations, contact information, the

voluntary nature of participation, and the directions to complete and return the informed consent form. Willing participants were given 5 business days to return the completed informed consent. Participants did not receive a reprimand or any negative repercussions for choosing not to participate. The identities of participants were encoded and maintained confidential during the reporting phase. Participants were assigned codes such as Educator 1 (E1), Educator 2 (E2), and so on to protect their anonymity.

Methods of Establishing a Research Participant Working Relationship

A research-participant working relationship was established through a variety of measures. Each participant received an invitation to participate email detailing the purpose of the study, participant role, and the advantages of participating in the research study. I contacted selected participants to arrange a date, time, and place to perform my semistructured interviews. I dispersed the potential participant informed consent forms and collected the forms in privacy envelopes. I provided an informed consent form for the observations. The consent forms included (a) researchers' contact information, (b) the voluntary nature of the study, (c) study procedures, (d) risks and benefits involved in the study, (e) disclosure statements, and (f) privacy disclosure of statement of researchers document retention and security for 5 years (Walden University, 2015). I kept all data collection confidential, and pseudonyms identified participants throughout the process.

The relationship established between participants and a researcher must be based on trust to obtain accurate information that informs this study (Yin, 2014). I do not work in the capacity of a supervisor or have authority over any of the participants in this study.

The participants and I have a preestablished level of trust, given that we may have attended union meetings together. I have not worked at the study school.

Measures for Ethical Protection of Participants

Researcher responsibilities include ensuring that their research study adheres to the approved ethical standards (Vanclay, Baines, & Taylor, 2013). IRB approval preceded the proper protocols for access and approval of the site. The Walden University IRB approval number for this study is 03-29-19-0557321. Before the study, consent to conduct research in the study setting was obtained from the building principal and submitted with the Walden University IRB application. All participants provided consent, in writing, prior to the study to comply with Walden University's ethical standards and safeguard the rights of participants.

Ethical research in human subjects requires the process of informed consent (Marrone, 2016). The informed consent documents provided the purpose and voluntary nature of this research study. Yin (2014) stated that confidentiality serves to protect participants. All participants were assured of the voluntary nature, the ability to quit, and to refuse to answer any interview question at any stage of the study. They were assured that their responses and identity would remain confidential. Furthermore, I expressed the purpose and intentions of this study were to preserve instructional responsibilities.

Data Collection

The use of multiple data collection sources support triangulation and aid in the establishment of trustworthiness in the results of a research study (Baskarada, 2014). Therefore, I used interviews, three data team observations, and a review of lesson plans.

Multiple forms of data provided the depth of information needed to determine the perception of teachers concerning the influence participating in data teams have on their instructional practices. This study examined three data teams to determine if elementary educators are using the approved DWIP within their data teams and how the data are used to support instructional practices. I used a qualitative study to identify themes using natural context from several sources (Lodico et al., 2010). I collected data through one-on-one semistructured interviews with elementary teachers, a review of lesson plan documents, and observations of three data team meetings.

I use the participant consent forms to obtain participant consent. To ensure that data were valid, participants had access to their transcribed interview data, so they may clarify any comments if desired. Additionally, I followed the school system procedures for data collection and preserved all ethical and legal expectations. Because I planned to record the interviews for accurate transcription, I obtained the participants' permission for using a recording device. Participants were provided with a semistructured interview protocol (see Appendix B) before the interview. I used an observation protocol (see Appendix C) and a lesson plan review protocol (see Appendix D) to collect additional data. To ensure ethical practices, participants did not include students.

The qualitative data collection included 11 one-on-one semistructured interviews, three observations of data team meetings, and a review of lesson plans. The interviews, observations, and review of lesson plans were designed to gain elementary classroom teachers' perceptions of the influence data team participation has on their instructional

practices. For participant convenience and my own organization, each form of data was collected sequentially.

After I obtained consent from the IRB at Walden University, the school district research department, and the school administration team the procedures for gaining consent from the participants were conducted. The participant criteria included: (a) possessed a teaching certificate, (b) employed at the study school, and (c) participated in data team meetings for a minimum of one full school year. The purposefully selected teachers were emailed an introductory letter clarifying the background of the research, intent, and procedures of this study. Additionally, the voluntary nature of the research, risk factors, and the benefits to participation were stated with the protections of privacy, payment, my contact information, Walden contact information, and the request for consent to participate was provided within the consent forms.

Eleven of the 30 certified teachers at RES consented to participation in the study. The participants were asked to provide a date, time, and location that would work for them to participate in the semistructured, one-on-one interview process. I dispersed and collected potential participants' informed consent forms. I provided each possible participant with an informed consent form for the observations. Each participant was advised that participation was voluntary, no incentives would be provided in exchange for participation, and that withdrawal was allowed at any time during the study. I kept all data collection confidential, and pseudonyms identified the participants throughout the process. Participants were given a copy of the semistructured interview protocol (Appendix B) before the interview. The process gives the participants ample time to

prepare for the interviews (Savva, 2013), adds to the working relationship between participants and researcher (Rizo et al., 2015), and improves participant understanding of the study (Cridland, Jones, Caputi, & Magee, 2015). The 11 participants provided permission to record the interviews. First, I obtained participant informed consent from each participant. Then, I initiated the interview process, which was followed by requesting a lesson plan for review.

I interviewed each teacher individually in the location of their choice. Three interviews were conducted in a conference room within the Grade PreK–3 hallway. The eight additional interviews were completed in teacher classrooms, as requested. I gathered teacher background information by asking interview question one. Then I asked the six additional questions that align with the research questions. Additional probes were an option during the interview process to allow the participants to further develop their answers (Creswell, 2014). Leading questions and multiple questions were not used during the interviews (Creswell, 2014). Each interview conducted occurred for 30-45 minutes. During the interview process, I remained respectful and nonthreatening. I wrote notes to document my reflections during each interview.

A Word document was developed to keep track of the transcribed data from each participant following the interview. Each interview was transcribed and given to the participant for transcription checking and acceptance to be incorporated into this study. Creswell (2013) stated that participants may review the interview transcripts to check that the transcripts correctly depicts the statements of the participant. Each participant confirmed the transcriptions and did not need any edits to the transcriptions.

The second collection of information was a sample of teacher lesson plans for review (Appendix G). I used the lesson plan review protocol (see Appendix D) to collect additional data. Participants were asked to voluntarily provide a copy of one lesson plan for review without any student identification. Nine of the 11 participants provided a copy of their lesson plan. I reviewed the lesson plans to determine how teachers demonstrate their use of student data or flexible grouping when planning classroom instruction (Gorissen, van Bruggen, & Jochems, 2013).

The final data collection piece included three data team meeting observations. Only participants, who provided consent were documented during the observations. I used the observation protocol (see Appendix C) to collect data during the data team meetings. I attended three grade-level data team weekly meetings/PLCs to collect data through observations for 30 minutes each meeting. Participants were notified before the data team/PLC meeting when I would conduct the observation. Data team participants who chose not to participate in this study were not adversely affected.

Furthermore, participants who chose not to participate were excluded from data collection. A summary of each data team meeting was transcribed in a word document. Each participant received a summary of the data team observation that they participated in. Through member checking, participants were asked to review the interpretations of the data team meeting observations. Each participant received a one-page summary of the findings to confirm for accuracy. Each member confirmed the observation summary and did not require any changes to the findings.

Interviews

I used interviews, the most common form of qualitative data collection to obtain comprehensive data (Frels & Onwuegbuzie, 2013). I conducted one-on-one semistructured, open-ended interviews with the study participants (Paine, 2015). One-on-one semistructured interviews allowed for interpreting information, capturing data regarding the participants' perceptions, and making judgments (Elsawah, Guillaume, Filatova, Rook, & Jakeman, 2015). Due to the difficulty of observing specific teacher perspectives, behaviors, and feelings regarding data teams, I believe interviews were a necessary method of data collection for this study. One-on-one semistructured interviews are similar to conversations, while a structured interview question collects better information on the research topic (Yin, 2014). Researchers use one-on-one semistructured interviews to collect detailed data.

The data collection can be recordings, through notes, or a combination (Gale, Heath, Cameron, Rashid, & Redwood, 2013). McIntosh and Morse (2015) recommended that qualitative researchers data collection includes using semistructured interviews comprising of open-ended questions, in order to learn new information and maintain validity by using additional probing questions to acquire significant data (Doody & Noonan, 2013).

A preliminary interview protocol, with essential questions for all participants, is required for a descriptive single case study design (Yin, 2014). I used Yin's (2014) different levels of questions to derive the interview questions. Level 1 interview questions ask the interviewee a specific question. Level 2 interview questions are

questions asked of an individual case. Yin (2014) suggested that most questions in case studies should be Level 2 questions, which ask about the individual case or single case study. The interview protocol (see Appendix B) served as a guide for collecting and describing the participants' perspectives (Silverman, 2013) and was aligned to the eight semistructured interview questions.

The interview questions focused on participant perspectives on the data team collaborative process as it relates to collaborating and planning for data used during meetings, data used to support instructional practices, and demonstrating the use of student data in planning instruction. The use of protocols was an important part of the data collection procedure (Yin, 2014). A researcher maintains the focus of a research study by utilizing an interview protocol. The interview protocol improved the reliability of the data collection (Yin, 2014). The protocol design was developed using Yin's (2014) and Creswell's (2014) work.

I developed an interview protocol (Appendix B) guided by the research questions, conceptual framework, review of the literature, and descriptive single case study examples. A panel was asked to conclude whether the interview questions sufficiently addressed the research questions. The panel of expert educators included individuals with doctorate degrees in education. The panel was asked to evaluate the questions and directions for content validity. This five-person panel was comprised of individuals, who work in education and participate in data team meetings, but exclude teachers from RES. I made notes of the recommendation of the panel and edited the questions accordingly.

I sent each participant, of this study, an electronic copy of the interview questions prior to the interview (see Appendix B). Savva (2013) recommended participants receive the questions in advance to provide better answers and seek an explanation. Then I interviewed each teacher individually. I asked each teacher about their work experience at the beginning of each interview. Then I asked the research questions. Additional probes were an option to give the participants the opportunity to expand on their answers (Creswell, 2014). Leading questions and multiple questions were not used (Creswell, 2014). Each interview lasted between 30-40 minutes. I remained nonjudgmental, nonthreatening, and respectful throughout each interview. With permission from all the participants, I audio recorded every interview. I wrote notes to document my own reflections. After each interview, I transcribed the interviews into a Word table to organize the interview data collected.

Lesson Plan Review

According to several researchers, some archival records include (a) books, (b) personal records, (c) journals, (d) earlier research, (e) websites, and (f) online materials (Ajagbe, Isiavwe, Sholanke, & Oke 2015; Yin, 2013). For this study, I collected lesson plan records provided by the teachers to support relevance to the research problem. I requested participants to provide a copy of their lesson plans following each interview. All student names or identification were removed from the lesson plans before being submitted.

I reviewed the lesson plans to determine how teachers demonstrate their use of student data or flexible grouping when planning instruction (Gorissen et al., 2013). The

lesson plan protocol (Appendix D) was used to investigate how teachers demonstrate their use of student data in planning instruction. The lesson plan review was derived from the literature review of data team best practices and the use of DI in small groups (Connor et al., 2014; Getha-Eby et al., 2014; Marsh et al., 2015; Strachan, 2015; Williams, 2013). I was able to understand how certain values were reflected in the physical allotment of classroom space and activities to reflect the topic being researched (McNamara, 2010).

Observations

Faculty data team/PLC meetings provide an opportunity for observing individual and group interactions. The team meetings occur weekly for a total of 30 meetings per school year. I attended three meetings for 30 minutes for each meeting. Gathering data from observations and interviews provided a comparison of espoused and experienced practices within data team/plc processes. Therefore, the observations included all participants but data were collected from the 11 interview participants.

I provided each observation participant with an informed consent form. Participants were asked to sign and return the informed consent form to begin the data collection process. The data team/PLC participants were not forced to participate. I ensured that all participants knew their participation was voluntary. Each of the three data team/PLC meetings were notified in advance that I would conduct an observation. Participants who chose not to participate did not receive any consequences. I observed three data team/PLC meetings in which several participants provide informed consent. Data team members who did not provide consent were excluded from the data collection.

During the weekly planning sessions, I was not a participating member of the data team/PLC. During the team meeting, I observed the data team meeting to collect data on how the data team members interact and plan for data use. To complete this task, I used an observation protocol (see Appendix C), derived from Bogdan and Biklen (2007). Bogdan and Biklen (2007) stated that an observation protocol should be descriptive and reflective. The purpose and intent of completing a descriptive observation were to accurately describe the evidence (Bogdan & Biklen, 2007).

Pearson Education granted permission (See Appendix F) for the text by Bogdan and Biklen (2007) to be used in this study. The observation protocol was created to identify specific areas where data-interaction or discussions might occur, the team's responsiveness to those conversations, and my initial thoughts. The observation protocol strived to provide a description of the data team dialogue between the data team members. Describing the physical setting provided an understanding into how the data team interacts and plans for data use during the meeting. The data collection phase included data from each observation.

Alignment of Research Questions

I designed the research questions to investigate how (a) the data team collaborates and plans for data use during a meeting, (b) elementary classroom teachers perceive the influence of data team participation on their instructional practices, and (c) elementary teachers demonstrate their use of student data in planning for instruction. To methodically address the purpose of the study, the research questions must align with the methodology (Yin, 2014). The questions were structured to be open-ended and based on

the framework and related literature, which encourages participants to provide detailed responses about their experiences during data team/plc meetings. Appendix E describes the alignment of the research questions with the interview questions.

Data Management and Storage

I maintained a secure data management system that included field notes and transcribed notes in a Word document for future coding (Yin, 2013). I created and maintained an electronic folder to store each transcription and notes. The electronic folder was used to record the observation notes, lesson plans, and lesson plan review logs. All data were kept confidential and secure by using a password to access on my personal USB external hard drive. All protocol notes and transcriptions included pseudonyms to protect participants. Data will be stored for 5 years following the completion of this study and then will be deleted and any printed paper copies will be shredded.

Role of the Researcher

In a qualitative study, role of the research includes collecting, organizing, and interpreting the data acquired (Fetters, Curry, & Creswell, 2013; McCusker, & Gunaydin, 2015). The researcher is known as the instrument during the data collection process (Cronin, 2014; McCusker, & Gunaydin, 2015); therefore, I was the primary data collection instrument and adhered to the ethical principles and guidelines to protect human subjects during this research study. My role in this study was to design the interview research questions, observation protocol, lesson plan review protocol, and contact the potential participants. My role included collecting data through one-on-one

semistructured interviews, observation of three data team meetings, and review of lesson plans. I coded the language (interviews, lesson plans) and interactions (observations). After codes were established, I analyzed the codes for patterns and grouped them in similar themes. The patterns discovered in the data collection were reviewed to determine if and how they relate to the topic of data-driven decision making.

I disclosed to each participant the purpose and requirements for this study and the doctoral program. I expressed to the participants that this study and program was selected because of my desire for personal growth and social change development. As the researcher and educational practitioner, this study was a learning experience to adjust my own practices.

Past roles. I was an elementary classroom teacher in several public elementary schools for a total of 15 years. Each of my experiences was very different. I taught in a public charter school and several different public elementary schools. I served as a PD lead teacher, instructional coach, summer school administrator, and the 80/20 coach. I worked in schools located in Pennsylvania, North Carolina, and Maryland. My beliefs and experiences may influence how I interpret the data, and consequently, the results of my descriptive case study. An explanation of my biases is detailed in a later section.

Current role. Currently, I am an itinerant special educator with the preschool early childhood department. In this capacity, I service five preKindergarten students in their boundary school by providing special education services to them and consultative services to their teachers. I service three schools within the GCPSD. I am responsible for completing each student's Individual Education Plan progress reports, annual reviews,

and reevaluations. I also work under the child find supervisor and conduct child find referral meetings for preschool children who are 3-5 years old and who are suspected of having a disability. None of these duties take place at RES.

Relationships to participants. I do not participate in PD activities at RES. I have never functioned in the capacity of an administrator at RES, thus removing any potential conflict of interest. My nonadministrative role at the study site did not influence the data collection or influence participant responses to interview questions. As a special education itinerant and child find referral special educator, I do not provide special education services to the students at RES.

Potential bias. Researchers are the primary data collection instrument during a qualitative research study (Cronin, 2014; McCusker & Gunaydin, 2015) and must recognize the existence of potential bias in their research (Malone, Nicholl, & Tracey, 2014). Researchers need to be aware of any potential bias and purposeful sampling containing bias in their approach (Patton, 2015). Finlay (2014) suggested utilizing an open style process during interviewing to avoid bias and set the researcher's frame of allusion aside.

I recognized the existence of potential bias based on my personal experiences or views; therefore, I used member checking to mitigate any potential bias as recommended by Houghton, Casey, Shaw, and Murphy (2013). Potential bias may include my perceptions of how an effective data team meeting should be conducted and how the DDDM process should influence instructional practices. Member checking increased the quality of data analyzed and it improved the validity of the results of this study (Krumpal,

2013). Semistructured interviews are a type of interview used in qualitative research because of the open-ended nature of the questions (Doody & Noonan, 2013).

Semistructured interviews promote in-depth and essential information collected from participants (Doody & Noonan, 2013; Mitchell, Madill, & Chreim, 2015). One-on-one semistructured interviews allow for more small talk, nonverbal communication, and provide participants' expressions (Irvine, Drew, & Sainsbury, 2013). Therefore, a bounded qualitative descriptive case study design was employed to interview participants through semistructured questions.

Data Analysis

The qualitative data collection approach included collecting, transcribing, and analyzing data as a method of addressing the identified problem. I analyzed data from 11 one-on-one semistructured interviews, three data team observations, and reviewed the nine lesson plans to discover the findings and answer the research questions. The semistructured interviews, three observations, and a review of lesson plans were designed to gain elementary classroom teacher perception of the influence data team participation has on their instructional practices. Yin (2014) suggested using an analysis process followed by an inductive reasoning method to generate, collect, and record data.

Methods of Precoding

The phases of data analysis, for this study, included precoding, open coding, and axial coding. Yin (2014) stated that researchers control validity and reliability by ensuring that a well-defined and well-structured data analysis procedure is followed. I began the first phase of the inductive analysis or precoding phase. I replayed the recorded

interviews and documented the information. Verbatim transcription of each interview allowed for a deeper understanding of the data (Riessman, 1993). Each participant was assigned a letter and a number for identification purposes. The recordings were played several times to familiarize myself with the data. This strategy is also known as precoding (Ravitch & Carl, 2015).

After precoding, I reviewed the notes recorded during the three observations. I typed up the notes in a word document to become familiar with all the observation data and record the lesson plan reviews. Data analysis of each of the three observations were compared and contrasted to the interview responses. Data analysis included identifying the similarities and differences among the interview responses and the observed behaviors to search for key elements or themes that emerged (Yin, 2013). I noted connections between the participants' perspectives of DDDM on their instructional practices and the principles of DDDM.

Researchers use data analysis to collect relevant data to support the conceptual framework of a study by coding, discovering, identifying themes, and organizing the themes into the intended study (Silverman, 2013). Data analysis comprises of studying and interpreting data that leads to themes identification (Davidson, Paulus, & Jackson, 2016). A qualitative researcher explores, examines, or discovers new perspectives relating to the study (Morse, 2015).

Open Coding

The next phase I conducted was an open coding process. Open coding allowed me to identify segments of the data that might be useful by making notations in the margins

(Merriam, 2009). This phase of data coding began by reading the interview transcripts and marginal notes within the Word document to fully immerse myself in the data. I created a data analysis code table in a Word document to record codes and categories that emerged during the process. The data from the interviews were coded by hand using a Word document. The raw data were placed in the left column of the data analysis code table.

Brackets were placed around each sentence or phrase to aid in the coding process. I read through the data several times to create tentative labels summarizing what was being stated. I reread the data carefully using the questions suggested by Frankfort-Nachimas and Nachimas (2008). They recommend asking: (a) What type of behavior demonstrated? (b) What is the structure of the behavior? (c) How frequently does it occur? (d) What are the causes? (e) What are the consequences? and (f) What are people's approaches for handling the behaviors?

As I reread the data, I asked myself the above questions to assist in the data analysis process. This process formed codes that were coded using a colored font. Different colored font represented a different code. For example, if teachers continuously discussed student data, I used the same color font. Student data became a code. Each code was identified for additional analysis. As I reread the transcripts, I found 72 codes during the transcription process (Appendix H). The words and phrases that repeated within the text were coded. The codes included words such as Agenda, Lesson Studies, and Standards. I created a similar electronic Word file containing identified codes for ease of data management of each data set.

The data gathered from the three data team observations allowed me to continue with phase two of the inductive analysis. Each observation was recorded separately in a word document and labeled, for example, O1, O2, and O3. The data coding process for each observation began by reading the observation notes within the Word document to fully immerse myself in the data. A Word document was used to record codes that emerged during the process. The data from each observation were coded by hand. Brackets were placed around sentences or behaviors. I read through the data creating labels to summarize the behaviors or statements noted during the observation. I read through each observation separately to fully immerse myself in the data. The codes and categories were recorded, by hand, in the Word table next to the corresponding observational data.

I completed this process by reading through the data multiple times, creating labels to summarizing behaviors and statements made by participants, and using a colored font to code the observation data. Each font color represented a different code. For example, if the observation data repeatedly noted lesson studies, the same color font was used. Thus, lesson studies was a code. The observation codes included words such as Lesson Studies, observations, and objectives. Codes were stored in a Word document to aid in the data management of each data set. I combined the interview codes with the observation codes. Once the codes were combined, I found overlapping codes.

I further identified teacher perspectives of the influence data teams have on their instructional practices by conducting a lesson plan review. Nine of the 11 participants provided lesson plans for the review. Creswell (2012) recommended using other

documents to corroborate the finding of a study. I used the Lesson Plan Protocol (see Appendix D) to conduct the lesson plan review. The data gathered from the nine lesson plans allowed me to continue with the inductive analysis. Each lesson plan review was recorded separately in a word document. Each lesson plan was labeled for organizational purposes, for example, LP1, LP2, and so on. The data coding process began by reading through each lesson plan separately to aid in full immersion into the data. I studied the lesson plans and took notes to document evidence of student data use, planning of small groups, tiered assignments, and the use of formative assessments. These notes were recorded electronically on the electronic lesson plan protocol sheet that was used for analysis. The lesson plan protocols aided in comparing and contrasting the lesson plans. A Word document was used to record the codes that emerged from the lesson plan reviews.

The data from each of the nine lesson plans were coded by hand. I read through the data several times and labeled concepts that repeated through the lesson plans. Each label was represented by a different colored font to code the lesson plan review data. For example, if the lesson plan review data continually noted small groups the same color font was used to represent small groups. Small groups became a code. The lesson plan review codes included words such as standards, assessments, and grouping. I combined the codes from the interviews, observations, and lesson plan reviews. Once the codes were combined, I found overlapping codes. A list of initial codes is in Appendix H.

I did not interact with the participants during the lesson plan review process. I reviewed lesson plans to document how teachers demonstrate their use of student data in

planning instruction. Data from the lesson plan review provided corroborating evidence when compared to the codes that emerged from the interviews and observations. The text drove development of the codes and categories. I did not use predetermined codes during the data analysis.

Axial Coding

The third phase of the inductive analysis involved the use of axial coding to group my open codes into categories (Merriam, 2009). Auerbach and Silverstein (2003) stated that coding assists in the organization of data and the discovery of patterns within the data. Therefore, I used open and axial coding at the initial phase to discover patterns by using color-coded fonts within Microsoft Word document to distinguish concepts (Merriam, 2009). I reread and reviewed the data to identify significant coded statements. These statements were sorted and grouped into a broader category, which was interpreted as a pattern or theme. If the same codes appeared in other participant interviews, observation transcripts, and in the lesson plan review, the overlap allowed me to see the development of reoccurring codes. Appendix H provides a list of initial codes and collapsed codes.

Development of Themes

The themes were drawn from the semistructured interviews, three observations, lesson plan review, and the literature review. This final phase interpreted all data. During the analysis of the interviews, observations, and lesson plan reviews several themes developed. I used the patterns in the data to determine the themes. The data were

reviewed and revised several times during the coding process. I reviewed the findings to determine if they made sense.

Codes that overlapped in the interviews, observation notes, and lesson plan reviews were collapsed to provide a clear picture of the patterns or themes. I created a Word document to assist in organizing the patterns and themes (see Appendix I). The patterns provided the participant perspectives and identified reoccurring perspectives. Rebar, Gersch, Macnee, and McCabe (2010) recommended that the process should continue until the research questions have been answered, and saturation has occurred.

Themes are typically the big ideas that explain what is learned in a study (Lodico et al., 2010). The themes provided an understanding of how teachers use the data team approach to collaborate and plan during meetings, how teachers perceived the influence of data teams on their instructional practices, and how they demonstrated the use of data in planning for instruction. Moreover, the themes clarify the factors that inhibit or support teachers when trying to use data to alter their instructional practices. Thus, determining if elementary educators are using the approved DWIP within their data teams and how the data are used to support instructional practices. The five themes that formed after the data analysis of this study were (a) data team member preparation, (b) data team meeting, (c) sources of data, (d) instructional practices, and (e) lesson plan components. Table 2 shows a summary of the themes that were identified. The findings were summarized using tables and a narrative.

Table 2

Description of Themes

Theme	Description
Data team member preparation	Teacher states how a teacher prepares for a data team meeting
Data team meeting	Teacher states or describes events of a data team meeting
Data Sources	Data that focus on student learning
Instructional practices	Practices that a teacher uses during instruction
Lesson plan components	Lesson plan components are stated, described, or found in lesson plans.

Technology was a significant feature throughout the process of collecting and analyzing data. I used email to correspond with the school district research department, school administrators, and teachers. I used a micro-recorder to document the eleven interviews. I used Microsoft Word to transcribe each interview and the three observations. Word was also used to create data analysis code tables. The data were collected and recorded using a sequential process.

Evidence of Quality and Procedures

Internal validity. Member checking may be used to improve the reliability and validity of the collected data (Loh, 2013). Member checking is a technique used to verify accuracy, credibility, validity, trustworthiness, and transferability of the collected data as a truthful representation of the participants' responses (Loh, 2013). I established internal validity to provide credibility to the study. Internal validity examines any threats that would affect my use of participant data to draw conclusions (Creswell, 2014) accurately. I developed an interview protocol guide (Appendix B). I consulted a panel of knowledgeable educators, with their doctorate degree, who reviewed the interview

questions. The panel determined if the interview question sufficiently answered the research questions and evaluated the questions and directions for content validity. This five-person panel comprised of individuals, who work in the education field and participate in data team meetings, but excluded teachers from the study school. The panel recommended removing the word *please* from several questions. I noted their suggestions and revised the questions.

For accuracy, trustworthiness, and credibility, I used member checks and transcription checks to validate the findings. I transcribed each interview. The participants received a copy of their transcribed interview for transcription checking and acceptance to be incorporated into this study. Applying member checking provided each participant with the opportunity to review their transcribed interview. Creswell (2013) noted that participants may review the interview transcripts to confirm that the transcripts accurately depicts what the participant said. Each participant confirmed the transcriptions within the 5 business days provided. Participants reviewed the summary or interpretations of the data team meeting observations. Each participant confirmed the accuracy of their summary. Each member confirmed the observation summary and did not require any changes to the findings within the five business days allotted. Modified member checking ruled out any misinterpretations of the participants' perspectives (Merriam, 2009) and to ensure the accuracy of the transcripts and observation summaries.

Next, I analyzed the three sets of data (interviews, observation notes, and lesson plan review notes). Data were validated through the triangulation of the three data sets. Drawing information from more than one source added to the credibility and accuracy of

the data. Findings are more dependable and valid when they can be extracted from more than one source (Miles, Huberman, & Saldann, 2014).

External validity. The findings of a study have a larger significance when the findings are transferable to other contexts (Miles et al., 2014). Transferability portrays challenges in qualitative if external validity is not established within the findings of a study. External validity threats are issues that threaten a researcher's capability to draw the correct interpretations from the sample data to others, settings, and measures (Creswell, 2015). I included quotes from and summaries from the transcripts to support the findings/themes, which strengthened the transferability of the findings. Last, I identified discrepant cases that emerged during the data analysis process. I discussed the discrepant data in my report to further add to the credibility (Creswell, 2014). Discussing contradicting information adds to the quality of the data.

Discrepant cases. My examination of the interview transcripts intuitively handled discrepant cases and comparing them to the observation notes and lesson plan reviews. Creswell (2014) defined discrepant cases as evidence that disagrees with themes that emerged through the data collection (Creswell, 2014). Although most participants had similar experiences, frustrations, and needs, disconfirming evidence was evident. One of the 11 participants felt that participation in data teams had little to no effect on the decisions regarding flexible grouping among the students. Also, two of the 11 participants felt that the lesson plans had little to no reflection of the data used during the planning process. These discrepant cases were identified because they did not fit into the data from other participants.

Data Analysis Results

I documented the thoughts and perspectives of the elementary teachers using a narrative approach. Narrative data presentation allows the participants to express their views and experiences (Lodico et al., 2010). The reported data, consisted of interviews, observations of three data team meetings, and the lesson plan reviews. The data described the elementary teacher perspectives in regards to collaborating and planning for data use during a meeting. Data also answered the question of how elementary classroom teachers perceive the influence of data team participation on their instructional practices.

Furthermore, the data showed how elementary teachers demonstrate their use of student data in planning for instruction. The data narrative provided insight into the participant perspectives and experiences in the data team meetings. There were 11 participants in the study. Individual semistructured interviews were conducted within the school without interrupting instructional time. During the data analysis from the interviews, lesson plan reviews, and observations, several themes emerged. I began building over-arching themes by merging or grouping related categories into core themes (Merriam, 2009). This process resulted in five core themes: data team preparation, collaborative planning, sources of data, instructional practices, and components of a lesson plan. A list of the initial codes, collapsed codes, and themes is listed in Appendix H.

Overview of Themes

Data from the interview transcripts, data team observation notes, and lesson plan reviews were analyzed to identify the initial codes. The themes were inductively derived

from the data. The five themes were common among the elementary teachers. A summary of the themes is listed in Appendix I.

Theme 1: Data team member preparation. The interview data confirmed that some teachers use technology to gather and store student data while other teachers mentioned data binders, student portfolios, and data notebooks. For example, participant E1 stated, “In order to prepare for our data team meetings, I have to make sure that I have collected the data that I need to bring.” Participant E3 noted, “I put all the test scores on a Google spreadsheet by student name and standards.” The interview data confirmed that some teachers use technology to gather and store student data while other teachers mentioned data binders, student portfolios, and data notebooks.

Most (66%) of the teachers used the school agenda to look at previous steps, focus data, and next steps for the data team. The order of the steps used to prepare for a data team meeting varied for each participant. However, the steps included reviewing the agenda, organizing any data that administration is requesting, gathering work samples, gathering important information to share.

Theme 2: Data team meetings. All participants disclosed that the data team meetings are a positive component of their practice. Participants articulated the significance of gathering in a meaningful way to achieve common goals as a school team. The reported strengths of the data team meeting included (a) sharing ideas, (b) working towards a common goal, (c) teamwork, (d) observing others, (e) providing each other with feedback, and (f) problem solving. Teachers shared how important the data team meetings are to be able to discuss strategies that are working and do not work for them.

The participants shared their thoughts about the strengths and weaknesses of data team meetings. Participant E5 stated, “the greatest strength is the ongoing collaboration with peers and teammates.” Participant E3 felt Data Team participation gave her additional insights into the classroom: “I think the strengths of the process are seeing how the students are performing and where we need to help them.”

Five of the 11 or 45% of the teachers shared the value of the lesson studies. The lesson studies included the team collaboratively developing a lesson plan, establishing “look fors” when observing each other teach the lesson, and providing feedback to each other. The lesson study process lets the data teams problem solve and develop their instructional practices. The interview data described a data culture that consisted of ongoing communication and collaboration to guide the data teams.

Theme 3: Data sources. Grades PreK and Kindergarten shared that the team uses anecdotal notes and student work samples as a data collection piece. Participant E9 and E11 disclosed awareness of MQR testing (Math & Quantitative Reasoning) and E9 noted, “We have to test the kids and it tells us their reading levels for math[ematics]. We use our exit tickets for the data.” Participants also mentioned using unit assessments, running records, student participation, assessments, intervention data, and exit slips as additional ways to collect student data. Participants shared how the collection of student data helped meet the criteria set forth in the data team meeting agenda and with implementing process used by the data team.

Theme 4: Instructional practice. The interview data evidenced that teachers use the data team meetings to discuss what works and does not work. For example,

participant E5 said, “Data teams allow us the opportunity to reflect on best practices.”

This theme was reinforced as most (54%) of the participants discussed the importance of accountability and best practices. However, the interview and observation data revealed that the data teams do not always complete the data team process as intended. The reasons for this varied. The reasons included not everyone having the correct materials and an uncertainty of the steps outlined in the agenda.

A majority (81%) of the participants were agreed that the data team process influenced their instructional practices. Participant E4 stated that “the collaborative team approach is effective because we can compile effective practices and rely on teammates’ experiences for the strategies that are effective with our population of students.” However, the lesson plan review data did not evidence specific changes to their instructional practices. The participants were observed during a data team meeting observation discussing the use of equity stick and low to high level questioning strategies during a lesson study to increase student participation. The observation data analysis showed that the teachers were limited in articulating a variety of instructional strategies.

Theme 5: Lesson plan components. The participants shared many ways in which their lesson plan components reflect data use. Ten of the 11 participants or 90% of the participants mentioned using small groups to address misconceptions by the students and to reteach the lesson but only used ability grouping to determine groups. Participant E2 stated, “When I build my lesson plan, information that is taught is determined by the data that is gathered from the assessments.” Additionally, Participant E4 used the Data Team process to determine elements of a lesson plan: “Students with the same

misconception or needs the same material during a reteach lesson are grouped together.”

The lesson plan review data analysis conferred that the teachers were limited in documenting and using a variety of instructional strategies in their lesson plans.

Discussion of Findings

The purpose of this descriptive case study was to examine three data teams at an elementary school with the GCPSD to determine if elementary educators are using the approved DWIP within their data teams/PLCs and how the data are used to support instructional practices. The research questions explored how elementary teachers use the data team approach to collaborate and plan during meetings, how teachers perceived the influence of data teams on their instructional practices, and how they demonstrated the use of data in planning for instruction. The research questions that guided this study were:

RQ1: How does a data team collaborate and plan for data use during team meetings?

RQ2: How do elementary classroom teachers perceive the influence of data team participation on their instructional practices?

RQ3: How do teachers demonstrate their use of student data in planning instruction?

The conceptual framework, described in Chapter 1, was DDDM. The foundation for DDDM was expressed by several researchers (Ackoff, 1989; Faria et al., 2014; Mandinach et al., 2008). The findings and the literature on DDDM in schools was consistent. The DDDM framework that includes three levels of processing data: (a) data,

(b) information, and (c) knowledge. The findings showed that the participants used multiple methods to gather and organize student data. Evidence of accomplishing level one of the DDDM framework. The participants also evidenced level two by organizing, summarizing, and giving meaning to the data. The participants accomplished this by meeting regularly to discuss student data, lesson studies, and other agenda topics. The participants had difficulty moving from level two (information) to level three (knowledge). The findings suggest that the participants are limited in utilizing an assortment of instructional practices that alter instruction and increase student learning. This section will include patterns from the findings, interpretation of the findings, and the correspondence with the literature.

Elementary Teachers Use the Data Team Approach to Collaborate and Plan During Meetings

The participants, in this study, described the importance of the data teams to collaborate with one another. These data team observations showed that teachers have opportunities to learn from each other through scheduled collaborative discussions. The lesson plan review revealed collaboration among teachers. The lesson plans displayed similar activities, standards, and goals among the grade levels. This practice was supported in the literature. A conducive data analysis culture is established through collaborative conversations where educators build on one another's ideas (Slavin et al., 2013).

There was evidence that the teachers frequently collected student data prior to the data team meetings. Additionally, there was evidence that the teachers analyzed the data

during the data team meetings. The lesson plans supported the notion of data use by providing differentiated activities for students and small group instruction. Crone et al. (2016) recommend that the DDDM process include analysis of both qualitative and quantitative data for schools. The findings confirmed that the data teams analyze a variety of student data. The types of data analyzed by the data teams included items such as, observational data, running records, unit assessments, student work samples, anecdotal notes, exit slips, student participation, and Developmental Reading Inventories. Gerzon (2015) stated that participation in the DDDM process develops a culture where teachers use data to make decisions regarding their instructional practices.

Teachers Perceived the Influence of Data Teams on Their Instructional Practices

The teachers shared the value of the practice of lesson studies as one way that data team participation influences their instructional practices. In the conceptual framework, Ackoff (1989) recommended the process of combining data with understanding and expertise to form actionable knowledge, and acting on that knowledge. The lesson studies were described as a way, during data team meetings, to plan a lesson together. Then, the teachers observe each other teaching the lesson. Afterwards, they provide feedback to improve the lesson. During the data team observation, I observed teachers using the lesson study technique to review a lesson, discuss the pros and cons, and offer feedback. Next, the teachers discussed several teaching strategies to implement into the next lesson. However, the lesson plans did not support a variety of teaching practices. The teaching practices discussed and recorded were limited to small groups, exit tickets, level of questioning, and equity sticks. The small group sessions did not

support a change in instructional delivery when reteaching content. The literature review supported the practice of changing instructional delivery. Marsh et al. (2015) stated that instructional change should result in a change in delivery, not just reteaching the original content in the same way.

Teachers Demonstrate the Use of Data in Planning for Instruction

The teachers discussed using data to create small groups when planning for instruction. The small groups were based on a student's ability and documented weaknesses. During the data team meetings, teachers discussed ways to increase student participation and checking for student understanding. The teachers collected data to plan for future instruction. The lesson plans supported using DI by providing several formative assessments based on students' ability. This also supports using data to plan for instruction. However, teachers relied on ability grouping only for small groups in their lesson plans.

Conclusion

The findings add to the DDDM literature and the DDDM conceptual framework of this study. The study addressed the perceptions of teachers who use the DDDM process to inform their instructional practices. The findings confer that teachers have a solid foundation in planning and collaborating with data within their data teams. Most of the participants expressed the importance of the data teams for professional growth. The participants shared the value of participating in the data teams to learn from each other. The findings support that most of the teachers make instructional decisions, such as regrouping, based on student data. The other instructional changes included level of

questioning, equity sticks, and ability-based small group instruction. The findings support that the teachers have a limited resource of instructional models and best practices to incorporate into their lesson plans. The conceptual framework, DDDM, Ackoff (1989) noted that combining data with understanding and actionable knowledge is essential to using that knowledge to act. Therefore, there is a connection between the data teams and the ability of teachers to use data to alter instructional practice.

Section 3 offers a description of the project, which was developed from the findings of my study. The goals for this project is to increase knowledge of UDL for administration and teachers. The second goal of this project is to investigate teachers' use of UDL to plan and teach content. A recent literature review showed that researchers recommend using a universal design for learning (UDL) framework to support teachers when altering their instructional practices (Cook & Rao, 2018; Rao & Meo, 2016). Therefore, this project recommends using a UDL framework within the data team meetings to provide teachers with resources to expand their instructional practices. This study found that the teachers at RES collect, organize, and analyze various student data regularly within their data teams. In addition to the UDL framework, RES's existing data team structure will support new learning, reflective practices, and collaboration by incorporating the recommended website to alter instructional practices. This section (Appendix A) outlines the proposed recommendations, implementations, and evaluation for this project, as well as, the supporting resources. Section 3 concludes with the project implications at the local level, within the larger context, and addresses the positive social change that may occur as a result.

Summary

This section outlined the qualitative nature of this study. The purpose of this descriptive case study was to examine data teams at an elementary school to determine how educators are using the approved DWIP within their data teams and how the data were used to support instructional practices. This section presents the qualitative nature applied to answer the research questions. The procedures used gather the perspectives of the participants, along with how the data were analyzed. This study clarified the perspectives of elementary teachers at RES, and supports the project developed based on the findings of this study.

Section 3: The Project

Introduction

This qualitative study explored how elementary teachers use the data team approach to collaborate and plan during meetings, how teachers perceive the influence of data teams on their instructional practices, and how they demonstrate the use of data in planning for instruction. According to the results of the study, school administrators and teachers at RES would benefit from resources on how to alter their instructional practices.

To respond to the findings of this study, I created a white paper (Appendix A) that describes the two recommendations to help stakeholders expand their instructional resources and methods. The findings and literature review provide the basis for the recommendations to address research-based practices related to teachers altering instructional practices and increasing student achievement levels. The recommendations include increasing knowledge of UDL for administration and teachers and investigating teachers' use of UDL to plan and teach content. Additionally, I recommend resources teachers can use to collaboratively learn about the UDL framework and the strategies UDL offers to alter instruction.

Description and Goals

A white paper is appropriate for this project because a white paper is a position paper that allows a researcher to recommend potential solutions for an area of concern (Gotschall, 2016). I provide recommendations to address the concerns, in this study, for the RES teachers. The concerns identified in this study are the need for teachers to have a structure and resources for altering their instructional practices and demonstrating the

changes in their lesson plans. The goals of this project study is to increase knowledge of UDL for administration and teachers. The second goal of this project is to investigate teachers' use of UDL to plan and teach content. The majority of the participants (81%) agreed that the data team process influences their instructional practices. Moreover, five (45%) of the 11 teachers discussed the value of the lesson studies.

Incorporating a UDL framework structure into the data teams could further develop lesson plans and teachers' abilities to alter their instruction, possibly resulting in increased student achievement at RES. The limitations for this white paper include the narrow scope of the research, including that the investigation occurred at one site. Altering instruction is crucial for teachers; recent research has shown that teachers have difficulty finding ways to alter their instruction (Wood, Turner, Civil, & Eli, 2016; Wylie & Lyon, 2015). Marsh et al. (2015) stated that instructional changes result in a change in delivery and should not include reteaching the original content in the same way.

Rationale

A white paper is a strategy used to describe the findings, conclusions, and recommendations from a study (Engeldinger, 2016). The white paper in Appendix A shares specific recommendations based on my research findings (Lumby & Muijs, 2014). Through the data analysis, I discovered that teachers use various methods to collect student data and prepare that data for data team meetings. However, teachers have a set time to collaborate as data teams.

Based on the findings from the interviews, observations, and lesson plan reviews, I believe teachers would benefit from a UDL framework, which shares principles and

strategies for improving their lesson plans by designing educational experiences that can be accessed by all students (Center for Applied Special Technology [CAST], 2019). The interview data showed that 45% of the teachers shared that the lesson study process incorporated into the data team structure is a way to reflect on their practices and learn from each other. The lesson studies help teachers reflect on their instructional practices by providing feedback to each other about lesson delivery. I observed a portion of the lesson study process during two of the three data team observations. The instructional practices identified by teachers through the interviews and observations included (a) small groups, (b) exit tickets, (c) levels of questioning, and (d) equity sticks. The lesson plan review did not support a fundamental change in their instructional delivery or a variety of instructional practices. These findings suggest that the teachers would benefit from a framework or structure built into their data teams, which would focus on increasing their repertoire of instructional practices. The findings showed that teachers value the time to collaborate and learn from each other. Additionally, the findings revealed that teachers at RES have difficulty with altering their instruction to increase student achievement. To address the local problem, I developed a white paper outlining the overarching concern of altering instruction to increase student engagement, access to instruction, and student achievement.

The white paper includes an evidenced-based online training module, a timeline for implementing the recommendations, an evaluation measure, and supporting resources. Researchers at CAST developed the UDL framework (IRIS Center, 2009). The online training module focuses on teaching teachers about the UDL Framework and how to

implement UDL principles into their practice. The UDL module was developed to aid teachers in meeting the needs of each student in their classroom to the greatest extent (IRIS Center, 2009). Written by experts in the education field, the UDL training module offers educators and administrators at RES with an evidenced-based, universal, and reliable resource to alter their instructional practices. The literature review is focused on my recommendations in this white paper.

Review of the Literature

Through the data analysis, I identified five themes: (a) data team member preparation, (b) data team meetings, (c) sources of data, (d) instructional practices, and (e) lesson plan components. A review of scholarly literature was conducted focusing on the recommendations for this study. Databases included ERIC, Open Library, and ProQuest. The search terms used were *white paper*, *teacher learning*, *teacher reflective practices*, *lesson plans*, and *instructional methods*. The literature review provided the structure for my white paper as the project. This section includes discussion of the following topics: (a) white paper, (b) adult learning theory, (c) reflective practices, and (d) UDL.

White Paper

Many companies use white papers to inform the public about the technology and approaches they use in their regular operations. White papers have predominately been used in the business world (Campbell & Naidoo, 2017) and marketing world (Malone & Wright, 2018). Obregon (2017) recommended using a white paper to effectively make recommendations. Recently, researchers stated that a project study was a method to

support and recommend program changes (Bardach, 2016; McLaughlin, West, & Anderson, 2016).

A recent qualitative study focused on early literacy strategies used by kindergarten teachers and their administrators (Rossi, 2017). Rossi interviewed five participants to gain their insight of current literacy practices. As a recommendation, Rossi (2017) suggested a white paper. Obregon (2017) advocated for the use of a white paper to describe the study, which focused on the knowledge and skills lost by new graduate nurses when they experience a delay in transition to professional practice. The white papers, in each of these studies, consisted of findings, goals, and recommendations. Reviewing these white papers in the education field helped me realize how each study supports using a white paper to make recommendations for this project.

Adult Learning Theory

Education for adults has long been a point of concern. Because learning is formal and associated with schools, most adults feel they are not learning, but learning remains a continuous process. The three foundational learning theories include andragogy, self-directed learning, and transformative learning (Knowles, Holton, & Swanson, 2012). Knowles et al. (2012) stated that adult educators need to be familiar with the knowledge base to make the practice effective and to improve the responsiveness of their practices to the needs of adult learners. Knowles et al. (2012) championed the concept of andragogy (“the science of helping adults learn”), contrasting it with pedagogy (“the art of teaching children”).

In the education field, assumptions have been made about adult learners.

Knowles et al. (2012) argued that some assumptions including that the adult learner is likely to learn when the learner assumes a new social or life role, is internally motivated, and is eager to apply the new concepts to their life. Additionally, teachers need to know why they should learn something (Malik, 2016). The theory of andragogy supports PD that focuses on strategies to implement and not just on the content of the PD (Cochran & Brown, 2016). Knowles et al. (2012) added to the concept of andragogy, including the adult, is more problem-centered than subject-centered in learning and that they accumulate a growing reservoir of experience, which is a rich resource for learning. Bates (2017) noted that adults being problem-solvers, learn best when the subject is of effective instruction and involves the learner in countering challenges.

Moreover, these assumptions about adult learners helped Knowles's (1980) program planning model by addressing the challenges like making the adult classroom a place suitable for adults both physically and psychologically (McCray, 2016). Venables (2018) recommended an adult learning culture that include data team members being transparent during meetings, listening to the opinions of other members, addressing differences professionally, and creating a trusting environment. Effective job-embedded learning leaves a lasting impact on teachers (Zepeda, 2018).

Adult learning theories presents a functional approach through which teachers can be able to implement student classroom participation solutions (Bates, 2017). Brockett and Hiemstra (2018) noted that understanding the adult learning theory can be an effective method to examine ways to support teachers' instruction and student learning.

Adult learning offers one of the most effective methods to implement student-centered solutions and techniques, which improves the overall learner experience and willingness to participate (Bates, 2017). Similarly, researchers Erickson, Noonan, Brussow, and Supon Carter (2017) shared that using high-quality and evidenced based PD is crucial to increase teachers' knowledge, strategies, and skills; thus increasing student achievement levels. Moreover, Darling-Hammond, Hyler, and Gardner (2017) discussed the importance of pairing the adult learning theory to aid teachers in transferring their learning from PD to their own instructional practices.

An adult learning community is a good learning experience for teachers at all levels to ensure that they develop and promote collective learning agreements, respect for each other, and tolerance which is instrumental towards promoting greater learning participation (Bates, 2017). The andragogy theory supports PD that focuses on strategies to implement and not just on the content of the PD (Cochran & Brown, 2016). Bates (2017) noted that adults being problem-solvers, learn best when the subject is of effective instruction and involves the learner in countering challenges.

Reflective Practices

Reflective practice by teachers is an effective avenue for teacher PD and competency acquisition (Mesa, 2018). Mesa (2018) argued that reflective practice by teachers is a fundamental approach that can be used to enhance performance and encourages teachers to be more open-minded in terms of their teaching methods, which allows for continuous adjustment to adopt practices that work. PLCs have been identified in multiple literature sources as a practical organizational approach for providing

opportunities for teachers to engage in learning to improve their practice collaboratively. Steeg (2016) ascertained that reflective practice is a teachers' PD process that facilitates teaching, learning, and understanding. In her literature, she defines teacher reflection as a theoretical notion that is accepted in the literature as a significant ways teachers examine and change their professional practice and increase professional growth. She further argued that reflection is providing clarity to situations that initially appear unclear.

The advantages of group reflections following a PD involve reflections that (a) enriches understanding, (b) promotes communication and thinking ahead, and (c) encourages a shared commitment and actions among the group (Hardar & Brody, 2016). Reflecting on altering instruction is crucial because research has shown that teachers have difficulty finding ways to alter their instruction when misunderstandings occur for students (Wood, et al., 2016). Desimone and Pak (2017) described the importance of implementing reflective practices and the potential positive influences on improved teacher efficacy and student performance. Similarly, Kennedy (2016) recommended teachers are provided with learning activities that provide opportunities for them to participate in reflective dialogue about enhancing their pedagogic expertise and ways to alter their instructional practices. Similarly, Smolarek and Hora (2016) indicated that reflective practices that consist of collaborative conversations aid in identifying the strengths and weakness of instructional practices of educators. Sjoer and Meirink (2016) stated that a shared vision for a school is developed when collaborative and reflective conversations occur that build off the ideas and experiences of the participants. Thus creating a teaching culture that includes a shared vision and school pride (Sjoer &

Meirink, 2016). Voelkel and Chrispeels (2017) concluded that high functioning collaborative data teams that demonstrate continuous reflective practices that are committed to student achievement are effective interventions for school improvements.

Universal Design for Learning

Recently, researchers defined UDL as a scientific framework, which guides educational practices, reduces barriers in instruction, provides accommodations and supports, and expects high student achievement for every student (Lowrey, Hollingshead, Howery, & Bishop, 2017; Rao & Meo, 2016). UDL is associated with differentiating the pedagogy (Salend & Whittaker, 2017). The IRIS Center (2018) defined UDL as education presented in a variety of methods to promote student access and engagement for every student by taking into account student differences. Differentiating pedagogy presents the content in multiple ways, allows the student to demonstrate learning, and increases student motivation (Rao, Smith & Lowrey, 2017; Salend & Whittaker, 2017). Similarly, IRIS Center (2018) described the UDL structured lesson as a lesson that allows students to demonstrate their knowledge using an assortment of methods.

UDL was part of the National Education Plan of 2016 and the Education Technology Developer's Guide (Moore, Smith, Hollingshead, & Wojcik, 2018). Smith et al. (2019) concluded that UDL is more than a list of various options and strategies. Rappolt-Schlichtmann, Bakia, Blackorby, and Rose (2016) described UDL as a research-based teaching methodology that incorporates (a) student engagement, (b) student expression, and (c) adaption of information, while delivering flexible and multifaceted learning through customized instructional methods, materials, and assessments.

Universal Design for Learning and Lesson Planning

Researchers have noted how general and special educators should address standards by implementing UDL during lesson plan development (Rao & Meo, 2016). The Universal Design for Learning-Implementation and Research Network (UDL-IRN) developed an Instructional Planning Process to assist teachers in effective lesson planning (UDL-IRN, 2018). The lesson plan framework developed by UDL-IRN incorporates a backward design method that includes a) establishing clear student outcomes, b) anticipating learner variability, c) establishing measurable outcomes and assessments, d) identifying the instructional succession, and e) reflecting on both the instructional and learner outcomes (UNL-IRN, 2018). The UDL-IRN lesson plan framework provides teachers with ways to address possible instructional barriers, plan for student inconsistencies, and the ability to select instructional methods and materials that ensure equal access to education for all students (Novak & Rose, 2016; Ralabate, 2016). The UDL framework goes beyond identifying instructional methods and materials by incorporating evidenced-based practices (EBP) to effectively address the learning needs of each student (Ralabate, 2016). The researchers promoted starting with clear outcomes and ending with the final goal of student mastery (Novak & Rose, 2016; Ralabate, 2016).

Universal Design for Learning and Schools

“The Condition of Education 2018” reported that 13.2% of students between the ages of 3-21 had a disability and 34% of the students were assigned a specific learning disability category (McFarland et al., 2018). The California Charter Schools Association (CCSA, 2016) recommended teaching practices that focus on specialized instruction such

as UDL. This recommendation was based on their analysis of 2012/2013 and 2014/2015 school years student testing data that indicated students with disabilities were performing in the stronger than average category. The CCSA researchers conducted interviews and observations of school administrators, general education teachers, and special education teachers. They found that the school-wide initiatives with a focus on individualized instruction were the main factors to student success and achievement (CCSA, 2016).

Furthermore, a correlation has been established between the use of student data when developing instruction and making instructional decisions and significant success of students (CCSA, 2016). The schools in the CCSA (2016) study administered quarterly assessments to measure the knowledge and mastery level of standards in their students. In addition to summative assessments, the CCSA (2016) recommended formative assessments in the form of daily exit slips to improve student learning.

A recent narrative inquiry was used to explore how seven participants implemented the UDL framework into their classroom practices (Lowrey, Hollingshead, Howery, & Bishop, 2017). The participants were from schools mandated to incorporate the UDL framework throughout the school district. The participants shared that the UDL framework guided the design of their instruction. They described how their planning became more intentional because they identified methods, materials, and assessments. Student access, engagement, and outcomes increased by planning for the needs of their students. Furthermore, Cook and Rao (2018) recommended UDL as a guideline in scaffolding options and providing flexible options in reducing barriers while ensuring

access for each student; therefore, this white paper contains recommendations using the UDL framework and the UDL principles.

The focus of the UDL is designing instruction, which can aid teachers in understanding how to improve instructional practices and increase student learning (Cook & Rao, 2018). Rao and Meo (2016) stated that the UDL process aids teachers in creating standards-based instruction and provides UDL instructions. Moreover, Fisher and Frey (2017) stated that the UDL practices improve the learning experiences for each student implementing individual choices to demonstrate an understanding of learning

A recent study concluded that the UDL framework and principles are described as a positive educational pedagogy that encourages inclusion and access for all students (Smith Canter, King, Williams, Metcalf, & Myrick Potts, 2017). These researchers found that teachers face several challenges in the classroom, which include (a) diversity in the classroom, (b) rise in mandates that recognize and promote diversity, (c) movements that require inclusionary practices, (d) standards based instruction, and (e) an increase in accountability of student achievement levels. UDL shows promise to aid in the success of all students as research studies have shown improved student outcomes (Al-Azawei, Serenelli, & Lundqvist, 2016; Coyne, Evans, & Karger, 2017; Lowrey, Hollingshead, & Howery, 2017). Navarro, Zervas, Gesa, and Sampson (2016) conferred the significance of educators having the competency and resource that focus on the needs of all students. Thus, educational access is provided for the entire student population.

Project Description

The data analysis from this project study indicated a need for a framework and structure built into the data teams that offer support in lesson design and ways to alter instruction. The analysis of the interviews, observations, and lesson plan reviews showed a need for additional instructional supports for teachers. A position paper, or white paper, with recommendations, was chosen for this project based on the findings from this study. The local problem this study addressed was the uncertainty of elementary educators using the approved (DWIP) within their data teams and how the data are used to support instructional practices. The first recommendation is to include implementing a UDL framework within their data team meetings. The second recommendation focuses on the resources needed to collaboratively learn about the UDL framework and UDL principles to effectively implement UDL into practice.

This white paper includes the data analysis results to clarify the four themes that were discussed based on the semistructured interviews, observations of data team meetings, and lesson plan reviews. The themes for this project study are data team member preparation, data team meeting, sources of data, instructional practices, and lesson plan components. The two research-based recommendations were developed to aid teachers in using the UDL framework and principles. First, the UDL framework should be incorporated into the data team meetings to embed teacher learning into the data teams. The white paper outlines the recommendations for teacher learning to become part of the data teams for RES. The second recommendation includes using the online training module as a resource to support implementing the UDL structures within their data team

meetings. My recommendations are based on the elementary teachers' perspectives of how data teams influence their instructional practices at RES. RES is one elementary school in the district. However, this proposed model of lesson planning with various instructional methods may be considered for use by teachers in other data teams within the school district.

Implementation

The school principals should consider the resources and barriers needed to fulfill the recommendations to incorporate the UDL framework and principles into practice. The IRIS Center website is recommended as a tool to aid in implementing the UDL framework and strategies. The teacher learning that will occur in the already established weekly data team meetings will introduce, model, and share the UDL framework and practices with teachers over a nine-week span. This will preserve teachers time and not require additional meetings.

IRIS Center

The IRIS Center (2018) is associated with the Peabody College of Vanderbilt University. The IRIS Center website provides free training materials to be used by college faculty, PD facilitators, and other learners. The IRIS Center works with nationally recognized education experts to create the interactive modules, case studies, and activities to provide research-validated information about working with students with special needs or disabilities in inclusive settings.

Resources, Existing Supports, and Barriers

Resources and existing supports. One resource needed to support successful implementation of the two recommendations is time. Although the recommendations do not require any additional time, the weekly data team meeting times are needed. Teachers in the GCPSD have district issued computers. Therefore, the computers are a resource for the teachers to access the website and learning modules. Substitute teachers may be needed to cover classes and provide teacher with meeting time. There are no financial resources needed to implement this project because of the recommendation of using an existing free website and the computers are already provided by the district. Existing supports include computers, and internet access to use the website. I will serve as the trainer and facilitator for the UDL website.

Barriers. A potential barrier for effectively implementing this project is the lack of buy-in or resistance from RES teachers and administrators to support the UDL recommendations. Teachers who resist change often do so because they do not believe that the recommendations that are provided (Zimmerman, Schunk, & DiBenedetto, 2017). Teachers need to fully understand the recommendations to decrease their resistance. Presenting the data from this study and why the changes need to occur will increase teacher participation. Considerable effort will be given to forming a positive working relationship with the administrators and teachers at RES to aid the change process (Turan & Bates, 2013). Another barrier may be the weekly data team meetings are preplanned. However, the amount of data team meetings could change or be canceled.

Strategies that may be used to overcome a lack of buy-in may include sharing the success stories of UDL implementation in other schools, providing snacks, and emphasizing teamwork. The data teams could use substitutes to cover classes or provide teacher learning opportunities on scheduled PD days to address the possible cancellation or changes made to the data team meetings.

Roles and Responsibilities of Teachers and Administrators

Teachers. As with any change, ongoing communication and collaboration is essential to aid teachers in the process. Teachers will need to buy-in to the online learning module platform. Researchers stated that teachers may resist change when implementing a practice that involves a change in practice (Marzano, 2003; Parsells, 2017). Researchers stated that collaborative change involves teachers having a voice and may lead to an increased teacher engagement (Fullan & Hargreaves, 2016; Fullan, Rincon-Gallardo, & Hargreaves, 2015). Therefore, teachers should come to the data team meetings with an open mind to be an active and engaged learner.

Administrators. As RES leaders, the administrators must first buy-in to the recommendations. The administrators will have a meeting at their convenience with me to aid in establishing their buy-in (Fullan, Rincon-Gallardo, & Hargreaves, 2015). I will provide them with an overview of the website. Following the overview, I will be available to answer questions that they may have. Moreover, I will share with the administrators success stories from other school that use UDL. Once that has occurred, then the administrators should discuss how to create a culture for change within the data team meetings to promote teacher buy-in. The administration team would need to view

the UDL module prior to implementation. The administrators should support teachers in using the UDL Framework and principles. RES leaders need to document the improvements made by implementing evidenced based practices into the data team meetings to promote meeting the needs of students.

Proposal for Implementation and Timetable

Following the acceptance of the doctoral study by the University, I will meet with the administrators at RES to discuss implementing the recommendations of this white paper. Implementation can occur rather quickly, because there is not a financial obligation and the weekly data team meetings are already part of their practice. I developed a timeline intended to increase the knowledge and use of UDL by educators over a span of nine weeks. The timeline shows a gradual implementation of UDL Framework and principles to facilitate implementing with fidelity. Table 3 displays the recommended timeline to complete the UDL module.

Table 3

Universal Design for Learning Timeline

Week	Universal design for learning module description
1	Module home: This module introduces the UDL and the three principles. This section shares the module outline, a video on how to navigate the module, resources linking adult learning theory and the IRIS Center, and a wrap-up section. Challenge activity: A video of teachers who have difficulty meeting the diverse needs of the students.
2	Initial thoughts: Includes questions to consider and reflect on the challenge videos in regards to meeting student needs.
3	Perspective, resources, & UDL by completing this section teachers will understand the application process of UDL to the components of their curriculum. UDL and UDL principles are introduced.
4	Curricular components: This page discusses using UDL in each subject area. Learning goals: This section compares and contrast traditional learning goals and UDL goals.
5	Instructional materials: Provides various instructional materials and ways to use the materials.
6	Instructional methods: The activities support using representation, action and expression, and engagement to meet student needs.
7	UDL in practice: Through videos, charts, and additional links, teachers will learn about UDL lesson planning and see examples of traditional vs. UDL plans.
8	Implementation issues: Discusses possible barriers to the UDL and offers solutions to those barriers.
9	Assessment: Teachers will take an assessment through the module to self-reflect on their learning. Wrap up: A module summary, a video, and an activity to revisit their initial thoughts.

By embedding the IRIS, (2009) UDL module into practice the administrators can use teacher feedback to assess implementation. The findings of this study indicated that teachers would benefit from instructional strategies and resources to alter their instructional practices. Therefore, I recommend incorporating the UDL framework into the data team meetings. I also recommend that teachers use the UDL module and

resources to collaboratively learn about the UDL framework and principles to alter their instruction.

Project Evaluation Plan

To evaluate whether the white paper recommendations were successful, I will gather administrator feedback. One method of evaluation is to meet with the RES administrators to discuss their initial thoughts, comments, suggestions, feedback, or questions that remain. The evaluation process will be used to modify instructional modules or change resources for teachers.

A formative evaluation process will be used to assess this white paper. A set of open-ended questions (see Appendix J) will make up the formative evaluation for this white paper. Decorte et al. (2019) noted that using open-ended questions allow the participants to openly share their thoughts. The RES teachers will be asked to provide feedback on their learning of the UDL framework and principles. The teachers will complete the project evaluation after the teachers complete the UDL module (IRIS Center, 2009; see Appendix J). The teachers will receive the questions electronically to provide an easy method of writing their answers and returning the questions to me.

Project Implications

Possible Social Change

Educators are challenged to use student data to inform their instructional practices (Datnow & Hubbard, 2015; Mandinach & Gummer, 2015). The implementations of this white paper recommendations provide teachers with a deeper understanding of using the UDL framework to address implementing a variety of instructional methods within their

lesson plans. Teachers will increase student engagement, access to instruction, and achievement levels as they become more proficient at designing and implementing a UDL lesson plan. Social change could occur through building a teacher community-based response to data teams, changing teacher behaviors and strategies, and enhancing teacher accountability. By providing a better understanding of the relationship, district leaders, administrators, and teachers can gain insight into effective data teams and improved instructional practices that may lead to higher student achievement. Implementing UDL practices may lead to positive social change and result in more data driven instruction and provide students with more personalized, robust education outcomes, leading to increased college and career readiness.

Local Stakeholders

A white paper is ideal for ensuring communication with major stakeholders (Boswell & Smith, 2017; Dagenais & Ridde, 2018). This white paper summarizes data into relevant, concise recommendations that address the local problem. White papers are preferred by stakeholders, because a white paper summarizes research into a concise document (Boswell & Smith, 2017; Dagenais & Ridde, 2018). Rose et al. (2018) found that the time devoted to reading through the abundance of research and summarizing the results is additional reasons stakeholders prefer white papers.

The purpose of this study was to understand the data teams at an elementary school to determine how educators are using the approved DWIP within their data teams and how the data are used to support instructional practices. RES stakeholders include administrators and teachers that service students in grades PreK-5. Evidence of positive

social change at the local level should include lesson plans that demonstrate the UDL framework and principles that alter the instructional practices of teachers. In turn, this should increase the amount of achieving students at RES.

Larger Context

Several studies concluded that teachers learn how to analyze data and learn from the process, but do not make changes to their instructional practices (Datnow & Hubbard, 2015; Farrell & Marsh, 2016a; Van Gasse, Vanlommel, Vanhoof, & Van Petegem, 2016). Even though the teachers at RES are using data teams to analyze student data, the student achievement scores are not increasing rapidly enough. Examining the influence data teams have on instructional practices is not a topic with rich research. This project study would add to the needed body of research and literature related to DDDM. The desire is that this project study is to provide suggestions for teachers to improve instructional practices when lesson planning based on the interview, observation, and lesson plan review data.

Conclusion

From the data analysis of the semistructured interviews, three data team observations, and lesson plan review, a white paper report was developed to address the gap in practice between what improvement research asserts DWIP can make (Schwanenberger & Ahearn, 2013; Strachan, 2015; Valentin, 2014) and the lack of improvement of student outcomes since RES has implemented the DWIP. Currently, the school district does not have evidence, at any school level, of the how the data are used to support instructional practices. This white paper shares the doctoral study results and

recommendation with the RES administrators and teachers. A white paper was an effective way to influence the instructional planning and practices at RES. Section 4 includes the reflections and conclusions from this doctoral study.

Section 4: Reflections and Conclusions

Introduction

In this section, I share the strengths of the project, limitations of the project, scholarship, and project development. I analyze myself as a scholar and developer of the project. The implications and applications will be discussed in this section along with the directions for future research.

Project Strengths and Limitations

Project Strengths

A white paper that recommends a framework to enhance lesson planning and principles to alter instructional practices is the greatest strength of this project. Teachers can begin incorporating the UDL framework and principles within their classroom instruction. Collaboratively learning the UDL framework and principles within the data team meetings may be an effective way to focus on instructional practices for teachers, and a focus on specific UDL principles could bring about schoolwide changes (Desimone & Garet, 2015). The IRIS Center (2018) discussed that using UDL-structured lesson plans is essential to providing instruction in a variety of ways and allowing for multiple methods for students to demonstrate their knowledge.

A white paper format allows participants and administrators at RES the time to review the findings of this study and allows for broader recommendations, with longer reaching effects, than planning a 3-day PD session. The participants in the study expressed that they do not have enough time to complete their professional responsibilities. Furthermore, Aslan and Reigeluth (2016) found that teachers who were

deficient in time could feel overwhelmed. Therefore, creating a PD session was not feasible. The proposed recommendations allow for changes in instructional practice in their lesson planning without a PD session.

The recommendations of implementing the UDL framework and principles into the ongoing collaborative data team meetings is a strength of this white paper. This format promotes change within RES and possibly GCPSD. The collaborative approach of implementing reflective practices, adult learning theory, and UDL supports teachers (Spillane & Shirrell, 2018). Moreover, the recommended professional learning opportunities provide specific methods to implement the UDL framework and principles into instructional practices. Additionally, the recommendations support demonstrating data use in lesson plans and instructional changes. This white paper includes recommendations that will aid in using the UDL framework and principles while actively participating in adult learning and reflective practices. The white paper is a report document that the RES can use to understand the study, data analysis, and recommendations.

Project Limitations

A project limitation may be that the time given for ongoing learning during the data team meetings could be decreased. Currently, the RES data team structures allow the classroom teacher to have two consecutive class periods for data team participation. Another limitation of this project could be the recommended website and resources. Some teachers may not have difficulty learning and applying the material to their

classroom practices, while other teachers may not find this an effective learning method. Their comfort level with online learning could influence learning for teachers.

Recommendations for Alternative Approaches

The problem in this study was that, despite a local policy on data teams, GCPSD was unclear if elementary educators were using the approved DWIP approach within data teams/PLCs and how the data were being used to support instructional practices. The local problem could have been addressed in many ways. I could have investigated the problem by conducting a mixed-methods study. Data collection could have included surveys for teachers and administrators to complete on how they prepare and plan for data team meetings. I could perform classroom observations of teachers who teach reading or math in grades PreK–5. The observations would have allowed me to collect data to determine how data were used to support their instructional practices. This outcome may have led to me creating a program evaluation.

An alternative approach or solution to address this problem may have been to send lead teachers, instructional coaches, and teachers to a workshop that focuses on UDL. CAST offers PD opportunities for teachers and administrators with a focus on UDL. CAST also provides UDL guidelines. However, this method may impact the school budget because of the cost of the workshops and travel expenses. I could have designed a PD session as a solution. I did not create a PD session for the teachers because, during the data collection process, teachers stated a lack of time as a weakness.

Scholarship, Project Development and Evaluation, and Leadership and Change

Scholarship

Working towards this degree taught me a lot about conducting research. Moreover, this process has helped me learn and grow as a scholar. I have a new appreciation for the steps involved by teachers and leaders to prepare for and hold data team meetings. I learned that teachers prepare student data for data collection and analysis differently and can depend on the grade level. As a researcher, I learned the ability to look at a problem within the school setting and find current research and theories about our practices is essential to my professional growth. I learned that conducting research has specific steps and safeguards to protect the researcher and possible participants. This rigorous process taught me how to identify a local problem and determine how to address the problem. Meeting the requirements for the IRB and the school district research department was very rigorous. Collecting, organizing, and analyzing the data was a learning experience for me. I found the data analysis very challenging and a true learning experience. The Walden Advanced Residency was a positive experience that helped me further develop my study.

Project Development

Designing the project study was a learning experience. I was unaware of the ability to use a white paper in the education field to provide recommendations. I strived to create a project study that would accurately depict the perspectives of teachers while advocating for positive change. I determined that using an online forum during the already scheduled weekly data team meetings was an appropriate solution because

teachers expressed having a lack of time to complete duties. I also felt that the online forum would be convenient for teachers to review again. I think that providing an interactive and evidenced based solution will aid in teacher buy-in.

Leadership and Change

Completing this research process has given me confidence and ownership to continue to strive for social change. I feel that I have found my passion for social change by completing this process. I want to continue to thrive to aid teachers in improving instructional practices and student achievement. I can bring about change in the education field through the knowledge and skills that I have learned through the Walden process.

As a scholar-practitioner, I feel that I will continue to conduct research to learn and help others to continue to learn about our practices. I am available to assist the RES team in the use of the UDL framework and three principles. I will continue to be a resource and educational leader for the school and school district. As a scholar-practitioner, I understand how important student data can be to inform instructional practices to meet the needs of each student.

Reflections

Reflection of Self as a Scholar

Through my studies at Walden, I learned a lot about being a scholar. The project study process made me realize the importance of resilience as far as completing my doctorate. At times my progress felt slow and I needed patience, especially during the data analysis process. However, my persistence combined with my openness to accept

and act upon feedback from my committee, I was able to move forward through each stage of the project study.

I grew in my ability to be reflective and precise. As a scholar, I worked on numerous drafts and made revisions throughout each section. This process helped me be more precise in my thinking and writing. I feel that the process aided in developing my scholarly voice. Additionally, I believe that the Walden Advanced Residency was instrumental in my completion of this project. This is my first project study. Walden Residency supported me in my endeavors by providing resources, materials, and peer support. Before my Walden experience, I had never conducted a research study, which supports social change. Walden University has opened my eyes to how important social change can be for the education field.

Reflection of Self as Practitioner

I am committed to providing all students with a quality education, ensuring equal access to the curriculum, and advancing the education field is what motivated me to pursue my doctorate with a specialty in curriculum, instruction, and assessment. The Walden courses and the project study have developed my skills and knowledge. I have a new confidence to work on projects in the education field that will lead to positive social change. This school year, I worked closely with an instructional specialist to further develop my administrative skills. This opportunity allowed me to collect and analyze data for our department. The skills I learned at Walden helped me to be successful in this work. My Walden experience also aided me in examining the assessments, policies, and department processes to determine areas in which our department can improve our

practices. As a practitioner, I value my educational experience at Walden University. I learned a lot academically, developed my research skills, and have grown professionally and personally as a student at Walden University.

Reflection of Self as Project Developer

As an educational leader, I developed and delivered PD opportunities for teachers. I delivered predetermined PD by the school district or school administrators. Additionally, I planned PD opportunities based on training sessions that I attended and was asked to share with my colleagues. The research process at Walden has further developed my skills in being able to make sure that not all learning experiences are in the form of PDs. I came to understand how other factors such as time, experiences, and needs are essential in determining the delivery of a project. I learned how data collection and analysis are used to determine the needs of participants. Furthermore, I came to appreciate how literature or recent research must corroborate the practices that are recommended for addressing those needs. Walden has prepared me to take on these new endeavors, as assigned by my supervisors, and apply my knowledge and skills to these endeavors.

Reflection on Importance of the Work

Altering instructional practices to reach all learners is an essential aspect of teaching. Unfortunately, the research has shown that teachers struggle to find ways to alter their instruction when misunderstandings occur for students (Miranda & Hermann, 2015; Wood, et al., 2016; Wylie & Lyon, 2015). My findings revealed that teachers at RES meet regularly to discuss various types of student data. The interview, observation,

and lesson plan review data indicated that teachers would benefit from research based instructional practices to implement into their instruction and demonstrate those practices in their lesson planning. Teachers continued to share the same instructional practices within their lesson plans, interviews, and data team observations, which resulted in low student achievement levels.

As an outcome of this study, I developed a white paper project that consisted of implementing a UDL framework into their lesson planning. Furthermore, adding the UDL principles to their instructional practices. These recommendations would involve using several resources during their data team meetings and learning the process as a team. With adequate lesson planning and a variety of instructional practices teachers can improve their instructional practices, thus increasing student achievement.

Society has much to gain when teachers reach students in a positive way. Increasing student achievement levels can prepare more students for life, a career, and college. This project has the potential to help more students give back to society by providing a quality education for each student. I am optimistic that district leaders will acknowledge my work, understand the advantages for teachers, and the potential profits for students. The result of this research, my project, has the likelihood to bring about positive changes in the local school district and surrounding community.

Implications, Applications, and Directions for Future Research

If teachers can learn to build on their instructional practices, resulting action of increasing shared expertise is instrumental in creating educational change. When teachers actively participate in data team meetings and use student data to make educational

decisions, the results can lead to student achievement for all students. This equity of education to support the education needs of all students is the purpose of using DDDM. As for future research, there may be a need to study how to reduce teacher anxiety in regards to peer lesson study observations.

Conclusion

The field of education is complex and is constantly changing. The key findings in this research study were the need for a UDL framework to assist teachers in lesson planning and altering their instructional practices. These findings were shared during the participant interviews, as suggestions during the data team observations, and demonstrated in the lesson plans. First, teachers need to broaden their use of research based instructional practices by adopting a framework to assist in planning for instruction. Furthermore, a review of best practices to alter instructional practice is essential to effective instruction. Teachers expressed the importance and need of the data team meetings to learn and grow professionally. Finally, this must be offered in a way that teachers can apply the information in the context of their classrooms, thus providing effective instruction for all students regardless of their abilities.

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WHITE PAPER

Examining Teacher Decision Making and
Instructional Practice in Data Team

Mrs. Kelly J. Moffett

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Examining Teacher Decision Making and Instructional Practice in Data Team

Introduction

Despite average class sizes, highly qualified teachers, and a Common Core-curriculum, students' proficiency levels at RES remain under 35%, as reported on the State Report Card (2017). With an increased focus on accountability, K-12 educators are challenged to analyze and use student data to inform their instructional practices (Datnow & Hubbard, 2015; Mandinach & Gummer, 2015). In 2015, RES, a small urban elementary school, began implementation of the DWIP to address accountability mandates and student achievement concerns (District Strategic Plan, 2015). I sought, through this research study, to fill the local gap in practice between what improvement research asserts DWIP can make (Schwanenberger & Ahearn, 2013; Strachan, 2015; Valentin, 2014) and the lack of improvement of student achievement outcomes since the implementation of DWIP.

Local Problem

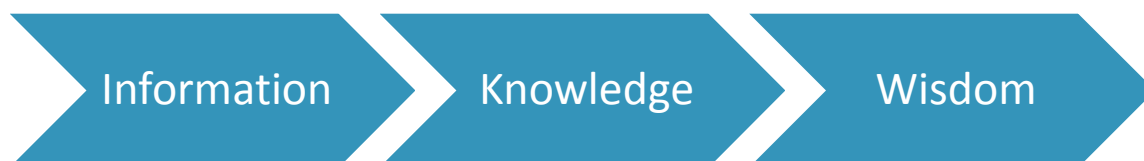
The Grover County Public School District (GCPSD: pseudonym) leaders are unsure if elementary educators are using the approved DWIP within their data teams/professional learning communities (PLCs) and how the data are used to support instructional practices. Currently, the school systems do not have evidence of data team success or failure and how the data are used to support instructional practices. This study sought to fill the local gap in practice between what improvement research asserts DWIP can make (Schwanenberger & Ahearn, 2013; Strachan, 2015; Valentin, 2014) and the lack of improvement of student outcomes since the implementation of DWIP.

Summary of the Study

Methodology

The problem focus is despite a local policy on data teams; the GCPSD does not know if elementary educators are using the approved DWIP approach within data teams/PLCs and how the data are used to support instructional practices. This study investigated the perception of the participants concerning the influence participating in data teams have on their instructional practices. I explored how elementary teachers use the data team approach to collaborate and plan during meetings, how teachers perceived the influence of data teams on their instructional practices, and how they demonstrated the use of data in planning for instruction.

Data-Driven Decision-Making, was chosen as the conceptual framework because data based decisions may positively improve teachers' instruction and student learning. The design for this study was around the premise that educators must integrate the use of data and the analytical processes of interpretation for DDDM (Faria, Greenberg, Meakin, Bichay, & Heppen, 2014). The models and theories of action for DDDM found in the literature are built upon the ideas expressed by Ackoff (1989). Ackoff (1989) stated data have no value until transformed into a useful form. This transformation involves three levels of hierarchy:



(Aven, 2013; Baskarada, & Koronios, 2013). Mandinach, Honey, Light, and Brunner (2008) developed a model, which included the data, information, and knowledge

elements of Ackoff's model. Mandinach et al.'s (2008) model involves wisdom translating knowledge into an implemented decision, which is followed by an assessment of its impact. Marsh and Farrell (2014) expanded on the Mandinach et al. (2008) model to accentuate the different characteristics of the practice; the significance of collaboration for effective data use. The purpose of this descriptive case study was to examine three data teams at an elementary school with the GCPSD to determine if elementary educators are using the approved DWIP within their data teams/PLCs and how the data are used to support instructional practices.

The focus for this study was to describe and explain the data team experiences and how the experiences relate to classroom instruction; therefore, an approach using qualitative research was appropriate to understand the participants' perceptions. Additionally, a bounded descriptive single case study is used when the researcher intends to gain knowledge about the meaning participants ascribe to experiences (Bernard, 2013) and provide clarity and descriptions (Yin, 2014). To study the teachers at RES, purposeful sampling was used. Eleven teachers made up the sample size because I wanted the ability to gain a more intense level of understanding, and that requires fewer participants through saturation in data themes (Yin, 2013).

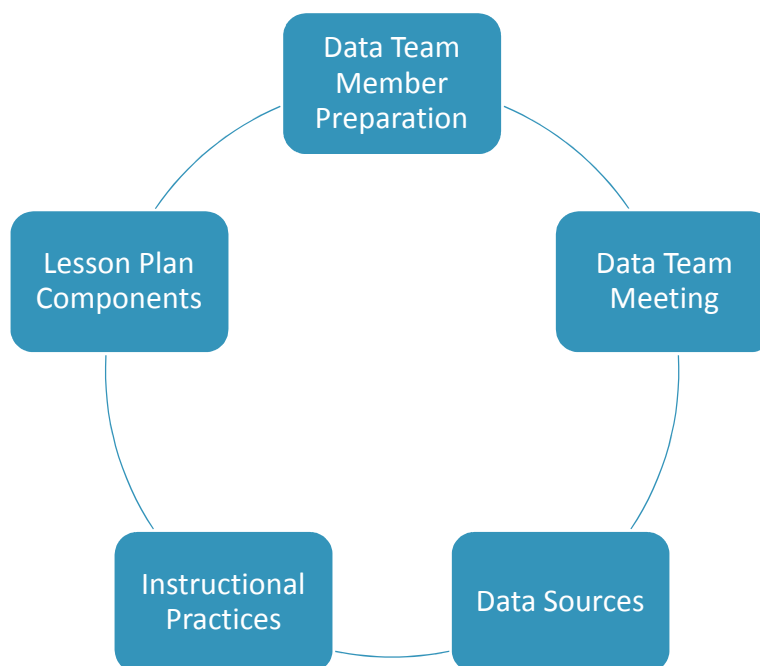
The participants for this study comprised of elementary teachers who serve students in Grades PreK-5. The criteria for participant selection included: possession of a standard teaching certificate, employment by the RES school of study for a minimum of 1 school year, and participation in the data team process for a minimum of 1 full school year. This was to ensure that participants had experience and knowledge of data teams.

The purposefully selected teachers were emailed an introductory letter clarifying the background of the research, intent, and procedures of this study. Additionally, the voluntary nature of the research, risk factors, and the benefits to participation were stated. Furthermore, the aspect of privacy, payment, my contact information, Walden contact information, and the request for consent to participate was provided in the consent. The participants were asked to complete consent forms if they expressed an interest in being a participant for this study.

Data collection consisted of interviewing 11 participants using one-on-one semistructured interviews, observing three data team, and reviewing the nine lesson plans provided by teachers. The interview questions focused on participant perspectives on the data team collaborative process as it relates to collaborating and planning for data used during meetings, data used to support instructional practices, and demonstrating the use of student data in planning instruction. Each interview was recorded, transcribed, and presented to the participant for their approval.

Data Analysis Results

The themes were drawn from the teachers' perspectives at RES based on the semistructured interviews, three observations, and lesson plan review. The findings from the interviews and three data team meeting observations were compared to the lesson plan review data. This analysis emerged five main themes.



Theme 1: Data team member preparation. The interview data confirmed that some teachers use technology to gather and store student data while other teachers mentioned data binders, student portfolios, and data notebooks. Most (66%) of the teachers used the school agenda to look at previous steps, focus data, and next steps for the data team. The steps used included reviewing the agenda, organizing any data that administration is requesting, gathering work samples, gathering important information to share.

Theme 2: Data team meeting. All the participants disclosed that the data team meetings are a positive component of their practice. The reported strengths of the data team meeting included (a) sharing ideas, (b) working towards a common goal, (c) teamwork, (d) observing others, (e) providing each other with feedback, and (f) problem solving. Teachers shared how important the data team meetings are to be able to discuss strategies that are working and are not working.

Theme 3: Data sources. Grades PreK and Kindergarten shared that the team uses a lot of anecdotal notes and student work samples as a data collection piece. Participants also mentioned using unit assessments, running records, student participation, assessments, intervention data, and exit slips as additional ways to collect student data. Participants shared how the collection of student data helped meet the criteria set forth in the data team meeting agenda and with implementing process used by the data team.

Theme 4: Instructional practices. The interview data evidenced that teachers use the data team meetings to discuss what works and does not work. A majority (81%) of the participants agreed that the data team process influenced their instructional practices. However, the lesson plan review data did not evidence specific changes to their instructional practices. The observation data analysis showed that the teachers were limited in articulating a variety of instructional strategies. Additionally, the lesson plans reviewed revealed that teachers were limited in documenting their instructional practices.

Theme 5: Lesson plan components. Ten of the 11 participants or 90% of the participants mentioned using small groups to address misconceptions by the students and to reteach the lesson. Students with the same misconception or needs are placed in the same group. The lesson plan review data analysis conferred that the teachers were limited in documenting and using a variety of instructional strategies in their lesson plans.

Recommendations

Establishing a Universal Design for Learning Framework

The data analysis showed that teachers need a UDL framework to assist them in lesson planning. Furthermore, teachers would benefit from a platform for teachers to

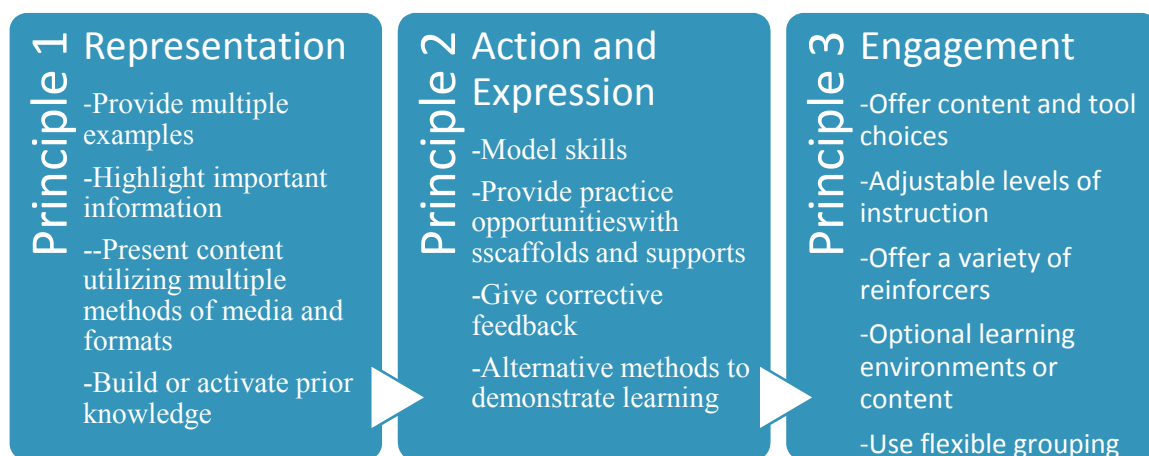
learn instructional methods that work with all students. Therefore, I recommend that RES incorporate a Universal Design for Learning (UDL) framework. UDL, as described by Nunez-Pardo and Tellez-Tellez (2015) is an instructional framework projected to increase significant access and decrease student learning hindrances for students with disabilities, diverse learning needs, and those from different cultural and socioeconomic backgrounds. This framework offers practical recommendations that are intended to assist and guide teachers who teach special and general education to accurately coach students with diverse needs, including students with disabilities (Steeg, 2016).

Primary Recommendation

It is recommended that RES consider using a framework to guide instructional planning and instructional practice discussions. Israel, Ribuffo, and Smith (2014) pointed out that UDL presents an evidence-based approach to implementing teaching techniques and practices which have been backed by research. The UDL framework consists of incorporating the UDL principles to learning goals, instructional resources, methods, and assessments (Iris Center, 2009). The IRIS Center (2018) described the UDL as the idea that education is presented in various ways to be accessible and engaging for each student, regardless of their learning modality. In addition, the UDL lesson plan structure includes various methods for students to demonstrate their knowledge (IRIS Center, 2018); including students who have a disability or are culturally and linguistically diverse. Thus, making using UDL framework and principles when planning and delivering instruction crucial for student success.

This framework highlights instructional methods in four categories. The four categories include (a) representation, (b) action, (c) expression and (d) engagement (CAST 2008). The UDL principles, created by the CAST (2008) organization, recommended providing multiple examples, highlighting important information, present content through multiple forms of media, and building or activating background knowledge for the representation category. The principles for the category of action and expression included modeling skills with a variety of methods, providing opportunities to practice skills with scaffolds, providing corrective feedback, and allowing alternative ways for students to demonstrate learning. Additionally, the principles for engagement recommended offering choices of content, providing adjustable levels of challenge in the assignments, allowing students to choose a preferred reinforcer from the options, allowing several options for the learning environment, and utilizing flexible grouping.

The UDL framework aids teachers in the planning process to plan for the diverse learners by implementing evidence-based practices to ensure an increase in student access, participation, and progress in their learning (Novak, 2016). This framework brings about the ability to reflect on their practices and use UDL principles to overcome instructional barriers. The UDL framework includes 3 principles to support teachers. The principles and some various instructional practices are displayed below. The principles and instructional practices are recommended to teach diverse learners (IRIS Center, 2008; IRIS Center, 2018).



Secondary Recommendation

Additionally, I recommend that the RES provides structures for the teachers to use with the UDL framework in their data team meetings. Through the lead teachers' efforts, it is recommended that structures include using the [/iris.peabody.vanderbilt.edu/udl/](http://iris.peabody.vanderbilt.edu/udl/) website as a resource for implementing the UDL into their practices. This would provide teachers with opportunities to look at the UDL recommendations and process. This collaborative learning process should include the case study modules. Teachers can watch videos of other teachers utilizing the UDL framework within their instructional practice. These discussions will help teachers reflect on their own practices and help each other understand the principles of UDL. The use of a website forum will allow teachers who are absent or unable to attend the data team meeting to still access the UDL information. Furthermore, the website provides additional resources that can be used to assist in their professional growth.

Conclusion

The purpose of this descriptive case study was to examine data teams at an elementary school to determine how educators are using the approved DWIP within their data teams and how the data are used to support instructional practices. The white paper was a method to summarize collected and analyzed data. The data collection involved interviewing 11 participants, observing three data team meetings, and reviewing lesson plans provided by nine teachers. The results revealed that teachers would benefit from a collaborative learning practice that utilizes the UDL Framework and recommended resources within their data teams. These structures offer a variety of instructional methods to incorporate into their instructional practices and show how to demonstrate the methods within their own lesson plans.

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Appendix B: Interview Protocol

Date/Time of Interview:

Place:

Interviewer: Kelly Moffett

Interviewee:

Position of Interviewee:

Questions for teachers:

1. Please describe your background in education.
2. Describe the steps that you take to prepare for a data team meeting.
3. You have been participating in the data team process throughout the school year. Based on your experiences and what you know about data teams, what do you feel are strengths and weakness of the DWIP?
4. Tell me how your participation in the data team has influenced the decisions you make regarding classroom instruction.
5. Please describe ways in which your participation in data teams has affected the decisions you make regarding flexible grouping of your students.
6. In what ways has collaboration during data team meetings increased your own learning and professional growth?
7. Describe the ways your lesson plans reflect data use in the planning process.

Possible Probing Questions:

You mentioned...can you help me understand what you mean?

Could you please tell me what you meant when you said ____?

Can you give me an example of... When do you think you would use...

Appendix C: Observation Protocol

Data-Driven Decision Making Observation Protocol

Date and Time of Observation: _____

Grade Level/Subject Area of Data Team Members: _____

Observer: _____

Data Team Members (use pseudonym) and setting:	
Observational Notes/Key Dialogue Concepts:	
Meeting Agenda:	Reflections:

Appendix D: Lesson Plan Protocol

Lesson Plan Protocol Participants' name (pseudonym): _____ Grade/Subject _____
Does the lesson plan provide evidence of student data? Yes/No Explanation:
Does the lesson plan demonstrate evidence of small group planned in the lesson? Yes/No Evidence:
Does the lesson plan demonstrate tiered assignments planned for small groups? Yes/No Evidence
Does the lesson plan demonstrate a use of formative assessment? Yes/No Evidence

Appendix E: Alignment of Research Questions to Interview Questions

Research question	Alignment of protocol questions to research questions
RQ1. How does a data team collaborate and plan for data use during team meetings?	PQ2. Please describe the steps that you take to prepare for a data team meeting. PQ3. Describe how the data team interacts with data.
RQ2. How do elementary classroom teachers perceive the influence of data team participation on their instructional practices?	PQ4. You have been participating in the data team process throughout the school year. Based on your experiences and what you know about data teams, what do you feel are strengths and weaknesses of the DWIP? PQ5. Tell how your participation in the data team has influenced the decisions you make regarding classroom instruction. PQ6. Please describe ways in which your participation in data teams has affected the decisions you make regarding flexible grouping of your students. PQ7. In what ways has collaboration during data team meetings increased your own learning and professional growth?
RQ3. How do teachers demonstrate their use of student data in planning instruction?	Please describe the ways your lesson plans reflect data use in the planning process.

Note: Research questions and data collection methods.

Appendix F: Person Education Permission

Mar 13, 2019

K. Moffett

WALDEN UNIVERSITY

Dear Kelly Moffett

Permissions

4th Floor, Auto Atlantic Corner, Hertzog Boulevard & Heerengracht
Cape Town, 8001
South Africa USAPermissions@pearson.com

PE Ref # 208325

You have our permission to include content from our text, ***QUALITATIVE RESEARCH FOR EDUCATION: AN INTRODUCTION TO THEORIES AND METHODS, 5th Ed. by BOGDAN, ROBERT; BIKLEN, SARI KNOPP***, in your dissertation or masters thesis at Walden University.

Content to be included is: 120-122

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Sincerely,
Michael Prince,
Permissions Granting Analyst

Appendix G: Sample Lesson Plan

Subject: Math Grade:1 Lesson Plan

Unit Title: Telling Time

Topic / Strategy: Telling Time/Half Hour

Materials:

Common Core State Standards:

1.MD.B3-Tell and write time in hours and half hours using analog and digital clocks.

Essential Questions:

Learning Objectives:

- I can tell time to the half-hour on an analog clock.

Problem of Practice

Students are having difficulty writing the minute hand and hour hand correctly and writing the time to the half hour on the analog clock.

Number Sense Routine: Student will participate in the number routine “Big Reveal” using the analog clocks. Teacher will pass out analog clocks to each student. Teacher will ask students to demonstrate a time on their analog clock, Students will hide their clock near their heart. When the teacher says “Big Reveal”, students will hold up their clock and reveal the time. Teacher will check for the correct time. Teacher will call on students to explain how they know they have the correct time. (The times for the number routine will be 3:00, 7:30, 10:00, 5:30, and 12:00.)

Mini-Lesson (10 minutes) WHOLE GROUP

Today we are working some more on telling time! We already know how to tell time to the hour. We will be working on telling time to the half hour. Telling time to the half hour is 12:30, 1:30, 2:30 and so on.

Teacher will show student demo clock and introduce clock song:

I’m a little clock, up on a wall. Here is big hand, here is my small. If you hold me close, you will hear, tic-toc, tic-toc in your ear. The big hand is the hour hand, have scholars repeat this (tell your neighbor, whisper it to me, etc.)

Teacher will say:

- The small hand is the minute hand, when we are telling time to the half hour the minute hand will always be on the six. Where will the minute hand always be? (Student will call out: on the six!)
- The tricky part about time to the half hour is that the hour hand won’t be pointing directly at a number. Instead, it will be halfway between two numbers, but it is time to the half hour.
- Teacher demonstrate showing 12:30. You see...the hour hand is between the 12 and the 1 because it is halfway past 12. When the time is 1:30 the hour hand will be halfway between the 1 and the 2.
- Teacher will practice with students; reading all of the half past times. (12:30, 1:30 etc.)

Mini-Lesson (10 minutes) WHOLE GROUP

Today we are working some more on telling time! We already know how to tell time to the hour. We will be working on telling time to the half hour. Telling time to the half hour is 12:30, 1:30, 2:30 and so on.

Teacher will show student demo clock and introduce clock song:

I’m a little clock, up on a wall. Here is big hand, here is my small. If you hold me close, you will hear, tic-toc, tic-toc in your ear. The big hand is the hour hand, have scholars repeat this (tell your neighbor, whisper it to me, etc.)

Teacher will say:

- The small hand is the minute hand, when we are telling time to the half hour the minute hand will always be on the six. Where will the minute hand always be? (Student will call out: on the six!)
- The tricky part about time to the half hour is that the hour hand won't be pointing directly at a number. Instead, it will be halfway between two numbers, but it is time to the half hour.
- Teacher demonstrate showing 12:30. You see...the hour hand is between the 12 and the 1 because it is halfway past 12. When the time is 1:30 the hour hand will be halfway between the 1 and the 2.

Teacher will practice with students; reading all of the half past times. (12:30, 1:30 etc.)

APPLICATION/Small Group (20 minutes)

Teacher will ask students to find the mistake on the analog clock (i.e. 3:30 instead of 2:30) What did I do wrong? (student responses: you didn't read the hour hand correctly. The hour hand goes between the 2 numbers; you have to look back at the number that comes first out of the two numbers. That is the number that tells you the hour hand?)

- Teacher will move demo clock hands to show 6:30. Why is my minute hand on the six? (student response: because it is half past the hour) Where is my hour hand? (student response: between the 6 and the 7) Why? (student response: because it is halfway to 7:00).
- Teacher will walk through 4 more problems with students (4:30 1:30, 10:30, and 9:30).
- What does it mean when the big hand is on the 6?
- Which is the hour hand?

Skills & Practice (15 minutes)

Teacher will pull a small group of students who are struggling with this skill. The other students will practice telling time to the half hour using task cards with a partner.

Assessments/Exit Ticket(5 minutes)

(Exit Slip and/or Workbooks)

Exit Slip: Students will write the time provided on an analog clock and circle the minute hand with a color pencil.

Differentiation:

RED

GREEN

BLUE

YELLOW

Appendix H: Themes

Initial code	Collapsed code	Evidence	Theme	Evidence
Collected data Observational data Anecdotal notes Organize data Distribute assessments Grade Evaluate data Technology Agenda Review data Data binder Prepare Focus data Time Contributing Factors	Organization	E1 have to make sure that I have collected the data that I need to bring. E4. I look at the agenda at the section that says next steps	Data team Member Preparation	E10 (obs 1) The rolling agenda is Shared with the school team. The agenda included materials, topic, expectations, timekeeper, and note taker. E3 I put all of the test scores on a Google spreadsheet by student name and standards E7 Basically you bring that binder with your results and data to
Lesson Studies CFI Transparent Conversations Confidence New ideas Growth Resources Team experience Feedback Sharing Professional develop. Observe others Make sense of data Understand where students perform Help each other Problem Solving	Collaboration	E1 Being able to collaborate during our data team meetings has definitely been helpful in my own learning and professional growth.] E4 The collaborative team approach is effective because we can compile effective practices and rely on teammates experiences for the strategies that are effective with our population of students.]	Data Team Meeting	E10 reviewed ways to give feedback; stating a concern based on the data E8 Based on my experience some strengths included that as a team we seem to understand how to identify problems based on data and we were able to use a number of resources to assist us.]
Unit assessment Running records Student work samples Anecdotal notes MQR testing Exit Slips Student Participation Behaviors	Data	E4 Things that come up may include the county asking for specific data for example the developmental readiness assessment E7 So based on how the students' perform on individual assessments determines how the students will be grouped	Data Sources	E7 The data can include unit assessments, running records all of the information that pertains to their data based on that week or that month.

Map Reading Scores DRA Assessments Intervention Misconception		and that could either be weekly monthly depending on what the discussion is.]		E3 It is also easier to see the school wide data in one document and all teachers can discuss school wide interventions.]
Best Practices Accountability instruction Address concerns Differentiation Centers Equity Sticks Checking for understanding Think pair share Level of questions Student incentives Positive Phrases Modify	Teaching	E1 An additional strength of the process is that it involves the entire school working together to help strengthen instruction E8 I believe that my participation in the data team help me modify my classroom instruction	Instructional Practices	E5Data teams allow us the opportunity to reflect on best practices. E4 The collaborative team approach is effective because we can compile effective practices and rely on teammates experiences for the strategies that are effective with our population of students.]
Objectives Standards Small groups Re-teaching Plan Pacing Reflect changes Reinforce skills Planning calendar Skills Mini-lesson Lessons Curriculum Outcomes	Lesson	E5 I use the data to plan small groups and center activities to reinforce skills that the students need more practice with. E7 So the piece of collaborative planning we talk about pacing, what lessons are going to be taught for the week, the exit tickets or assessments that you are going to use.	Components of a lesson plan	E4 It allows me to pace my students by addressing their needs in groups so some groups may be higher than others but once a skill is reached they are able to move to another group. E1 I am able to take what I have learned from my data in order to decide what concepts need to be re-taught and which concepts my students are ready to move forward with

Appendix I: Summary of Themes

Theme	Interviews	Observations	Lesson Plans
Data Team Member Preparation	<i>I check to make sure that my classroom data is up to date.” Then I go into the school data team meeting agenda. I look at the data that the admin. team is focusing on. I gather student work samples to support my data. I review notes from pervious data meetings to make sure that I have completed all of the next steps.</i>	The admin. team creates a rolling agenda for the data teams. The team recorded their notes on the rolling agenda. The rolling agenda is Shared with the school team. The agenda included materials, topic, expectations, timekeeper, and note taker.	1 of 9 or 11% of participants evidenced data from formative assessments in the lesson plan.
Data Team Meetings	<i>This process allows you to hone in on a specific learner-centered problem and put a specific plan in place for how the problem will be addressed. An additional strength of the process is that it involves the entire school working together to help strengthen instruction.</i>	How are students grouped? What assessment was used to create groups? Did the word problem that you modeled target the problem vocabulary?	7 of 9 or 77% of the participants evidenced tiered supports. The tiered supports were similar among grade levels. For example, the sentence frames were identical for several different grades.
Data Sources	<i>The data can include unit assessments, running records all of [of all] the information that pertains to their</i>	The data collected during the observations reviewed that the same students call out answers or are called on. Limiting	8 of 9 or 88% of the participants evidenced formative assessments in the lesson plans. The Formative

	<i>data based on that week or that month.</i>	the other children from participation and accountability of material.	assessments included exit slips, notebook prompts, debriefing opportunities, think/pair/share notes, and a worksheet.
Instructional Practices	<i>I believe that my participation in the data team helps me modify my classroom instruction. It allowed me to cater at times to some of the concerns that we noticed based in the data.</i>	Brainstorm ideas to remediate this instructional concern: Think pair Share, Equity Sticks, Low level to high-level questioning.	8 of 9 or 88% evidenced use of centers and differentiation of materials in lesson plans.
Lesson Plan Components	<i>Students with the same misconceptions or need the same material during a reteach lesson are grouped together. It allows me to pace my students by addressing their needs in groups so some groups may be higher than others but once a skill is reached they are able to move to another group.</i>	Team will select standards and activities/create assessments to add to planning calendar in order to prepare for upcoming instructions.	Additional data from the lesson plan review included some of the following areas: Objectives, Essential questions, Materials, Problem of practice, Mini lesson, Application, and Skills and practice.

Appendix J: Project Evaluation

1. In what ways did the IRIS Vanderbilt UDL module help you define UDL?
2. How will you incorporate the three UDL principles into your lesson plan design?
3. On page 5 and 6 of the UDL module, the researchers provide UDL solutions to instructional methods. How do you plan to use the recommended resources to alter your instructional practices?
4. When comparing a traditional lesson plan to a UDL lesson plan, what did you discover?