LINKING DATA AND LEARNING: A CASE STUDY EXAMINING TEACHERS' DATA-ANALYSIS PROCEDURES IN KINDERGARTEN LITERACY INSTRUCTION

A Capstone Project

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by

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APPROVAL OF THE CAPSTONE PROJECT

This capstone project, *Linking Data and Learning: A Case-Study of Teachers' Data-Analysis Procedures in Kindergarten Literacy Instruction*, has been approved by the Graduate Faculty of the Curry School of Education in partial fulfillment of the requirements for the degree of Doctor of Education.

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Abstract

A School Year in Kindergarten Classrooms: Literacy and Data Use Practices is a research project funded by The Spencer Foundation. The research team from the University of Virginia's *Curry School of Education and Human Development* was interested in the extent kindergarten teachers use their assessment data, including interim-benchmark assessment data, to modify literacy instruction for their students. For my capstone project, I examined a narrow aspect of this research project: five kindergarten teachers from one site and their interpretations of and responses to literacy assessment data to meet the instructional needs of their students. My goal was to better understand the teachers' processes of using their literacy assessment data within the organizational and political context of the school environment as well as, the structures that influence these processes. In this capstone project, I shared my professional problem of practice, site description, conceptual framework, literature review, and methodology to answer the proposed research questions.

Keywords: data-based decision making, data use, interim-benchmark assessments, pedagogical data literacy

EXECUTIVE SUMMARY

State and federal educational accountability policies place tremendous faith in the power of data – especially standardized assessment data – to support continuous student learning and school improvement (Young & Kim, 2010). In fact, the current educational discourse takes for granted the central role of teachers using data to improve instruction – making assumptions that teachers specifically have the skills to collect, organize, analyze, and interpret data to make instructional changes (Gummer & Mandinach, 2015). Despite this trend, questions about how teachers use data to make instructional decisions remain mainly unanswered (Hamilton, Halverson, Jackson, Mandinach, Supovitz, & Wayman, 2009). Many researchers posit there are specific norms that must be present for teachers to effectively use data to inform their instruction that include: strong assessment literacy, a sense of data literacy, opportunities for collegial discourse around data, and their specific content and pedagogical knowledge (e.g., Gummer & Mandinach, 2015 and Young & Kim, 2010.) However, despite increasing expectations to engage in data-informed practice, many educators struggle with aspects of data use (Datnow & Hubbard; Jimerson & Wayman, 2015; Gummer & Mandinach, 2015; Young & Kim, 2010).

Purpose

The Research Team (RT) from the University of Virginia's *Curry School of Education and Human Development* received funding from the Spencer Foundation to carry out a research study on kindergarten teachers' data-use practices in the area of literacy. The purpose of my capstone project, was then, to examine the processes the teachers used to analyze their literacy assessment data. Through this examination, I sought to answer the following questions:

To what extent did the teachers in Piedmont County Public Schools use their literacy data (PALS-K as well as classroom assessment data) to adapt instruction in response to students' needs?

In what ways did teachers alter classroom goals or objectives or modify student-grouping arrangements based on their assessment literacy data?

To what extent do the organizational and political context of the school influence the process of teachers using data?

Methodology

This capstone utilized a descriptive case-study approach to examine five kindergarten teachers' approaches to using assessment data, specifically, their interpretations of data and their instructional responses to them, within the context of literacy instruction. My conceptual framework used to analyze my data in this study consisted of Coburn and Turner's (2011) "Data-Use Processes for Teachers." Data analyses consisted of two phases. Phase I was an analyses of the data corpus which included: Think-Aloud-Protocols, lesson plans, classroom observations, and interviews of the building principal, and the Director of Elementary Education for the school district. Phase II consisted of an analysis of the follow-up interview I conducted with the Director of Elementary Education for the school district. From those two analyses, patterns were formed. Ethical considerations and a commitment to confidentiality remained at the forefront of this study.

Findings

My research study resulted in the following patterns:

1. Kindergarten teachers sorted their students into three instructional reading groups after noticing their PALS-K data, constructing implications for those groups, and then interpreting possibly why the students scored the way they did;
2. Teachers' lesson plans for September and October contained the same lessons for all three instructional reading groups but in December, the lessons varied for each instructional reading group; and
3. Kindergarten teachers' perceptions of leadership mandates affected their decision making in assigning students to instructional reading groups and determining whether or not students were prepared for first grade.

Conclusions and Implications

Based on the implications of the patterns, the recommendations to the Director of Elementary Education of PCPS revolved around building kindergarten teachers' pedagogical data literacy in order to support their data-driven decisions regarding future instruction for their students. The recommendations to the school district are as follows:

1. Increase teachers' pedagogical data literacy of their data sources through the creation of three professional development sessions for understanding kindergarten literacy assessment data, organizing literacy assessment data, and noticing, interpreting, and constructing implications of literacy assessment data.
2. Developing teachers' capacity in planning for and instructing with appropriate literacy strategies for each instructional reading group by requiring weekly grade-level meetings with the kindergarten teachers and literacy coaches with

lesson plans being submitted to the building principal for approval and feedback.

3. Diffusing teachers' misconceptions of perceived leadership mandates through the development of a Kindergarten reading vision plan and communication of literacy expectations during pre-service meetings at the beginning of the school year.

DEDICATION

To my husband, Jason, my daughter, Madison, my grandmother, Ann Rhodenizer, and my cats, Gizmo, Milo, and Rocco – each who have guided me through this experience in presence or in spirit. I love you all very much. I miss you, Grandma.

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Dr. Tonya Moon, you are incredible and I respect you so much. You have taught me so many things not only about teaching and learning but also, life. I always hang on to every piece of advice you give me, whether I want to hear it or not, because you always want what is best for me. You go out of your way to make sure I have the support I need and always encourage me even when I am defeated. Thank you, Professor, for all that you have done for me. I appreciate you more than you could ever know. I am going to miss you. I hope we can always work on school and life projects, together. ☺

My Rockbridge County Public Schools' team members: ***Dr. Phillip Thompson, Mr. Haywood Hand, and Mr. Mike Craft***, you have been so patient with me each time I

had to leave to go to class, or ask for data for a project, and for fully supporting this endeavor. Simply, thank you. Mr. Craft, you're next! I'm cheering for you!

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Martha Dudley, what would I do without you! Your positivity and "voice of reason" always keep me grounded and poised for another challenge. You're the best!

Kimberly Pollock, you are an amazing friend! Thank you for teaching me that hard work will "set me free" and not to forget to do a "piece of discipline" while working on all of my coursework. I am so grateful that you are my critical friend and always have and always will, respect your opinions. Thank you.

Jason, I love you. THANK YOU for always letting me "do me" and supporting me throughout all of my crazy ideas. Thank you for allowing my dream to become "Dr. Falls," or as you would say, "Dr. Mel," a reality…I hope!

Madison, you've earned this degree just as much as I have. I hope I've made you proud and been the role model you need to show you anything is possible if you just keep "plugging and chugging" at your dreams. I love you. Air Force…here comes my nurse!

Amy and Mom, both of you have faced difficult circumstances this year. Thank you for cheering me on although you had your own hardships to face. I love you.

Grandma, I miss you so much. I wish you could physically be here to share in this celebration. I hope I have made you proud.

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CHAPTER 1: INTRODUCTION

State and federal educational accountability policies place tremendous faith in the power of data – especially standardized assessment data – to support continuous student learning and school improvement (Young & Kim, 2010). In fact, the current educational discourse takes for granted the central role of teachers using data to improve instruction – making assumptions that teachers specifically have the skills to collect, organize, analyze, and interpret data to make instructional changes (Gummer & Mandinach, 2015). Despite this trend, questions about how teachers use data to make instructional decisions remain mainly unanswered (Hamilton, Halverson, Jackson, Mandinach, Supovitz, & Wayman, 2009). Many researchers posit there are specific norms that must be present for teachers to effectively use data to inform their instruction that include: strong assessment literacy, a sense of data literacy, opportunities for collegial discourse around data, and their specific content and pedagogical knowledge (e.g., Gummer & Mandinach, 2015 and Young & Kim, 2010.) However, despite increasing expectations to engage in data-informed practice, many educators struggle with aspects of data use (Datnow & Hubbard; Jimerson & Wayman, 2015; Gummer & Mandinach, 2015; Young & Kim, 2010).

Accountability Policies

Recent changes in accountability and testing policies have provided teachers with access to an abundance of student-level data, and the availability of such data has led many district- and school-level administrators to want to strengthen the role of data

analyses in guiding instruction and to improve student learning (Datnow & Hubbard, 2015; Hamilton et al., 2009; Gummer & Mandinach, 2015; Young & Kim, 2010). In the *Every Student Succeeds Act* (ESSA) of 2015, the United States Department of Education (USDOE) calls upon teachers to use assessment data to respond to students' academic strengths and needs (Darling-Hammond, Bae, Cook-Harvey, Lam, Mercer, Podolsky, & Stosich, 2016). This is not a new phenomenon; rather, in one way or another, educators have always had the expectation to use data from one-room school houses to the most recent focus on school accountability at the state and federal levels (Jimerson & Wayman, 2015). Although recent accountability trends explain why more data are available in schools, the question of what to do with the data remains primarily unanswered – leaving teachers "data rich and information poor" (Means, Chen, DeBarger, & Padilla, 2011). While data provide a way to identify what students have learned and the extent to which they are making progress toward learning goals, making sense of data requires teachers to have interpretative frames of reference for which to make meaning (Gummer & Mandinach, 2015).

My Capstone Project

For this capstone project, I conducted a descriptive case study of five kindergarten teachers' approach to using interim literacy assessment data, specifically, their interpretations of data and their instructional responses to their interpretations within the context of literacy instruction. I analyzed both archival data of observation field notes, interview transcripts, and documents as well as newly-collected data of a follow-up interview. I analyzed these data to determine the discovery of patterns with respect to the process the teachers used to analyze their interim benchmark literacy assessment data as

well as, their modifications in literacy instruction as a result of the information from the analysis. In addition, I was interested in the organizational and political contexts within the school that influenced teachers' data-use processes. Ultimately, I offered recommendations regarding data-use practices in order to support instructional decision making, specifically adapting lessons or assignments in response to students' needs, altering classroom goals or objectives, or modifying student-grouping arrangements.

Why focus on Kindergarten?

As mentioned previously regarding the recent shifts in educational policy and practice surrounding data use, more of an academic focus has been shifted in public schools to the primary grades such as kindergarten to support continuous school improvement (D'Agostino & Rodgers, 2017), specifically in literacy instruction, as it is essential for learning in all other content areas (Clay, 2013). Many states have created full-day kindergarten classrooms in recent years (D'Agostino & Rodgers, 2017; Hyson & National Association for the Education of Young Children (NAEYC), 2003) and the classroom diversity in terms of socio-economic backgrounds, race, culture, language, academic preparation, and achievement have led to complex learning environments for which young children are provided literacy instruction (Pearson & Hiebert, 2010), and for which the use of data could be used to serve varying needs.

A Response to the Problem: A School Year in Kindergarten Classrooms

On-going research efforts seek to understand and ideally, ameliorate, the issues surrounding teachers using data to make instructional decisions in the classrooms. For example, the Spencer Foundation supports "intellectually ambitious research oriented to improving the practice of education, independent of any particular reform agendas or

methodological strictures" (The Spencer Foundation, n.d., para. 1). In response to this request for applications, a team of researchers from the University of Virginia's *Curry School of Education and Human Development* sought and received funding to perform a research study on kindergarten teachers' data-use practices in the area of literacy.

The research project, *A School Year in Kindergarten Classrooms: Literacy and Data Use Practices*, allowed a team of researchers to investigate literacy instruction in kindergarten classrooms within public schools over the course of three academic years 2014-2015; 2015-2016; and 2016-2017, respectively. Specifically, the research team studied teachers' practices in using data, including interim assessment data in kindergarten classrooms, to modify reading instruction. The researchers also investigated organizational influences on teachers' data-based decision making practices in these classrooms.

During the 2014-2015 school year, the team recruited two school districts and two schools within each district. This capstone project focused on one of those sites. Following is a brief overview of both the site and the district data collection instruments.

Site

The research team conducted its initial research in the 2014-2015 academic year in Piedmont County Public Schools (PCPS)[1]. PCPS is located in Piedmont County[2], a mostly rural county located in the mid-Atlantic region of the United States. Although considered rural, Piedmont County is just south of a small metropolitan area, approximately 30 miles away. PCPS has approximately 7,000 students, each of whom attend one of its seven elementary schools, two combined schools, two middle schools, or

[1] Pseudonym
[2] Pseudonym

two high schools. Due to the specific nature of the project, the research team worked with PCPS administration to select two PCPS elementary schools to serve as research sites (Participating Sites). Although the research team worked with both schools in PCPS, only one, Blue Ridge Parkway Elementary School[3], is the focus of this capstone project.

Situating the Proposed Capstone Project

In the following paragraphs, I contextualize and describe my capstone project, including the specific conceptual framework for my research questions. First, I discuss my role in using these data from the research team's data corpus and the current problem of practice I chose to focus on for this project. Then, I discuss my research questions as well as the conceptual framework in which my project is situated.

My Role in *A School Year in Kindergarten Classrooms*

Although I am a part-time graduate student at the *Curry School of Education and Human Development* at the University of Virginia, I was not part of the research team for this project. Rather, I am a full-time administrator in a public school district in a rural area of Virginia learning at the graduate level to apply best research practices to my practitioner role in the school district. Throughout my 22-year career, I have worked in K-12, with the last 10 years as an elementary-school principal. Part of what I experience on a day-to-day basis includes facilitating assessment data meetings with teachers in order to identify strengths and weaknesses in student learning and creating instructional plans to either fill learning gaps of struggling students or to extend learning opportunities for advanced students. My conundrum is the process teachers use for analyzing

[3] Pseudonym

assessment data to make instructional decisions for future learning. This includes altering classroom goals or objectives or modifying student-grouping arrangements based on students' needs. This framed my problem of practice, and thus this capstone project, to review archival data similar to my district's data in order understand teacher pedagogical data literacy from another district similar to my own.

Problem of Practice

With the aforementioned context, I specifically chose to study this research project as it relates to my own context as an elementary administrator who is immersed in the data-driven decision making culture. Therefore, in embarking on this capstone project, I hoped that by coupling my experience as a public elementary school administrator and what I saw on a daily basis around the use of data collected from the project, would allow me to better understand the problem and ultimately, offer a series of recommendations not only for the school in which I examined the data, but also, for my own. In my experience as an elementary principal, I would often send emails to my teachers regarding upcoming grade-level data-analysis meetings. In my email to the teachers, I would not only announce the meeting time and place but also, say, "Please come to our meeting *prepared to discuss* your assessment data analysis and any instructional changes you would implement as a result." However, it was the "be prepared to discuss" segment of the teachers' data-analysis process that I did not understand. I had assumptions as a building-level leader that my teachers were able to take their assessment data, turn them into information about student learning, and make instructional plans for the future based on that evidence. But what I found, was that teachers varied in understanding not only what assessment data mean but also, how to

make accurate inferences about their students' learning in order to be efficient in their classroom instruction. Given the foregoing, I posed the following research questions for my capstone project:

To what extent did the teachers in Piedmont County Public Schools use their literacy data (PALS-K as well as classroom assessment data) to adapt instruction in response to students' needs?

In what ways did teachers alter classroom goals or objectives or modify student-grouping arrangements based on their assessment literacy data?

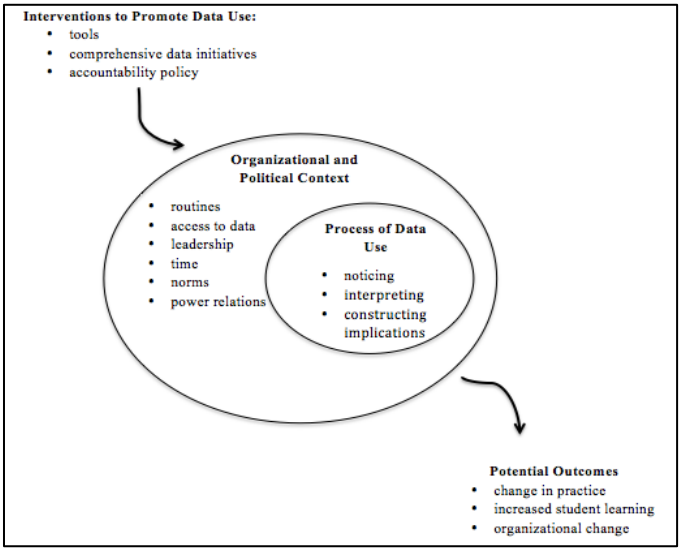
To what extent do the organizational and political context of the school influence the process of teachers using data?

A Framework for Organizing the Research on Data Use

As the data-use phenomenon continues to proliferate within educational policies for teachers to effectively use data to inform their practice, so too has research on data use (Mandinach, 2012). However, the research base is somewhat disorganized – drawing on different concepts and language – and provides only limited guidance about how the factors of data use interact together (Bulkley, Nabors Oláh, Blanc, 2010; Coburn & Turner, 2011; Datnow & Hubbard, 2015; Halverson, 2010; Nabors Oláh, Lawrence, Riggan, 2010; Mandinach, 2012; Mandinach & Gummer, 2015). Using the Coburn and Turner (2011) conceptual model, the framework depicted in Figure 1.1 (smaller version) and Appendix A (larger version) was intended to identify key dimensions for my focus in order to understand the process and outcomes of data use in the context of data-use

interventions. This section will be discussed in two parts: a board overview of the major components of the framework and then the details on each component.

Figure 1.1*:* Coburn and Turner's (2011) Framework for Organizing Data-Use Research



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Broad Overview of Major Components

Process of Data Use. At the center of the Coburn and Turner (2011) framework is *the process of data use*. Coburn and Turner (2011) define the process of data use as "what happens when individuals interact with assessments, test scores, and other forms of data in the course of their ongoing work" (p. 175). This interaction is a "critical component of the data-use process, playing a role in how teachers notice data in the first place, how they make meaning of it, and how they come to understandings about the implications of the data for action" (Coburn & Turner, 2011, p. 177). Thus, the process is entirely iterative as well as interactive and highly influenced by characteristics of the individuals involved and the dynamics of the social interaction around the data (Mandinach & Gummer, 2015). As a result, teachers tend to search for and see aspects of the data that support their beliefs, assumptions, and experiences (Young & Kim, 2010).

Organizational and Political Context. Coburn and Turner (2011) posit that the process of data use is shaped by the *organizational and political context* of schools and their districts, represented by the outer circle in Figure 1.1. The key dimensions of this context span from proximal – routines – to distal – power relations. The organizational and political contexts for public schools are quite complex. At the most proximal level, data use routines structure who teachers interact with around a specific set of data. These routines are influenced by the allocation of time, access to data, and organizational norms that guide teachers' interactions (Coburn & Turner, 2011). Leadership, a critical component, plays a pivotal role in all of these organizational dimensions (Coburn & Turner, 2011). Finally, power relations are intertwined within the context and influence all of the aforementioned dimensions. This highly politicized environment includes multiple constituencies with multiple goals (Coburn & Turner, 2011).

Interventions to Promote Data Use. As shown in the top left of Figure 1.1, *interventions to promote data use* interact with the dimensions of organizational and political contexts as well as how they attempt to alter teachers', school-level leaders', and district-level leaders' use of data in their ongoing quest of student and school improvement (Coburn & Turner, 2011). The categories of interventions range from such items as, a single protocol to guide a conversation to a more advance protocol for data analysis, to linear processes for collecting assessment data, to finally, complex school level and district level initiatives that bring together multiple tools for systemic improvement (Coburn & Turner, 2011). Features of these interventions directly influence and interact with the contexts and shape the process of teachers' data use (Coburn & Turner, 2011).

Potential Outcomes. Finally, the *potential outcomes* component, represented at the bottom right of Figure 1.1, is the list of benefits that schools and school districts can potentially realize if they engage in data-use activities (Coburn & Turner, 2011). Researchers, in turn, investigate the impact of data processes and data interventions on a wide range of outcomes. As a result, three interrelated outcomes of data use are shown in the data-use research as potential benefits such as outcomes related to student learning, those related to changes in teachers' practices, and finally, those related to organizational change (Coburn & Turner, 2011).

Definition of Terms

In my capstone project, I have used and will continue to use the following terms, which bear defining:

General Terms (Alphabetically Listed)

Data: "information [that] is systematically organized and analyzed to represent some aspect of schooling" (Schildkamp & Poortman, 2015, p. 2)

Data-Based Decision Making: rooted in Deming's (1986) business theory, refers to the systematic collection, analysis, examination, and interpretation of raw data for making instructional decisions based on the information extrapolated (Lai & Schildkamp, 2013; Mandinach, 2012; Schildkamp & Poortman, 2015; Wayman, Jimerson, & Cho, 2012)

Data Use: an interpretative process in which data must be accessed/collected, organized, and analyzed, to be turned into information (Coburn, & Turner, 2011; Mandinach, Honey, Light, & Brunner, 2008; Marsh, 2012)

Developmental Spelling Inventory: an assessment used to help group students by spelling developmental stage. They contain lists of words that were chosen to represent a variety of spelling features at increasing levels of difficulty. These features might include consonants, digraphs, blends, or short vowels.

Formal Running Records: a literacy assessment where students individually read a passage and teachers capture their reading behaviors on a protocol

Interim Benchmark Assessments: are defined as those that assess student knowledge and skills in a limited time frame and can be easily aggregated across school and classroom populations (Datnow & Hubbard, 2015; Perie, Marion, Gong, & Wurtzel, 2007).

Pedagogical Data Literacy: "teachers' ability to understand and use data effectively to inform decisions" (Mandinach, 2012, p. 30)

Phonological Awareness Literacy Screening Pre-Kindergarten (PALS PK): "a scientifically-based phonological awareness and literacy screening that measures preschooler's development knowledge of literacy fundamentals" (PALS-PK Virginia, n.d., para.1)

Phonological Awareness Literacy Screening Kindergarten (PALS K): "a measure of children's knowledge of several important literacy fundamentals: phonological awareness, alphabet recognition, concept of word, knowledge of letter sounds and spelling" (Invernizzi, Juel, Swank, Meier, 2013).

Quick Checks: an assessment to be used weekly between PALS-K screenings to determine students' progress on mastering the literacy fundamentals of alphabet

recognition, letter sounds, beginning sound production, concept of word, spelling, and word recognition in isolation

Routines for Data Use: Coburn and Turner's (2011) definition of *routines for data use* as the "modal ways that people interact with data and each other in the course of their ongoing work" (p. 181)

CHAPTER 2: LITERATURE REVIEW

As stated in Chapter 1, this capstone project was situated within the larger context of the Spencer Foundation grant and the research on understanding how Kindergarten teachers transform raw data into information in order to make informed decisions regarding literacy instruction. I completed this project in order to create a descriptive case study about five kindergarten teachers in one elementary school in PCPS and their process for gathering, analyzing, and interpreting literacy assessment data to provide information for improving their instructional methodologies and students' learning. In addition, my problem of practice is ultimately, how these teachers used literacy assessment data to support instructional decision making during reading instruction, adapted lessons or assignments in response to students' needs, altered classroom goals or objectives, and modified student-grouping arrangements. Finally, I wanted to determine how the organizational structures within the school influence teachers' literacy data use. As educators face increasing pressure from federal, state, and local accountability policies to improve student achievement, the use of data has become more central to how many educators evaluate their practices, alter their instructional sequences, and monitor student academic progress (Mandinach, 2012). In this chapter, I provide the research base for my capstone project by evaluating the current and relevant research that is available on instructional-decision making in the context of school-based instructional

teams embedded in a data-rich culture. I first define data-driven decision-making in the context of "using data" and then pedagogical data literacy by using the current research on these two phenomena. Next, I discuss the kinds of assessment data which predominate in kindergarten teachers' work with literacy data. Third, I will share the research on how teachers analyze and make use of their assessment data. Finally, I will review the research on the factors that highly influence teachers' use of assessment data to make instructional changes for student mastery, specifically data-use routines, leadership, structural, and cultural supports and the importance of each.

Why "use data?"

As discussed in Chapter 1, public schools are increasingly held more and more accountable for the education they provide students using public tax dollars. As part of this accountability, educators are required to use data to inform their practice. Therefore, data-based decision making has become increasingly important in order for school districts and individual schools to provide evidence to stakeholders that their students are learning life-long skills of reading, writing, and mathematics. In that context, Schildkamp and Poortman (2015) define *data* as "information [that] is systematically organized and analyzed to represent some aspect of schooling" (p. 2). For my capstone project, I used this definition of data because I wanted to focus on assessment data analysis practices (Lai & Schildkamp, 2013; Schildkamp & Poortman, 2015; Wayman et al., 2012. Therefore, *data-based decision making*, rooted in Deming's (1986) business theory, refers to the systematic collection, analysis, examination, and interpretation for making instructional decisions based on the information extrapolated from of raw data

(Lai & Schildkamp, 2013; Mandinach, 2012; Schildkamp & Poortman, 2015; Wayman et al., 2012).

A Universal Panacea

In the school-effectiveness literature, researchers identify data-based decision making as a core characteristic of high-performing schools (Ragland, Clubine, Constable, & Smith, 2002; Schaffer, Reynolds, & Stringfield, 2012; Schildkamp & Poortman, 2015; Snipes, Doolittle, & Herlihy, 2002; Supovitz & Klein, 2003). In addition, studies show that data-driven decision making can lead to increased student achievement (Campbell & Levin, 2009; Lai, McNaughton, Timperley, & Hsiao, 2009). Data use has been deemed the universal panacea for school improvement, and activities ranging from the examination of results from state tests to formative assessments in classrooms have all been put under the rather large umbrella of "data use" (Kennedy, 2011; Mandinach & Gummer, 2013). While this literature clearly prescribes data-decision making not only to increase student learning but also, to assist teachers in making efficient and informed decisions regarding instructional practices, not all teachers do this regularly (Mandinach & Gummer, 2013). In fact, several studies conclude that teachers do not use data to their best effect or even use data at all to make instructional decisions about student learning (Ingram, Louis, & Schroeder, 2004; Schildkamp & Kuiper, 2010; Schildkamp & Teddlie, 2008). In these studies, decisions by educators were generally taken based on intuition and limited observations (Ingram et al., 2004) and the decisions did not always contribute to student learning (Schildkamp & Kuiper, 2010; Schildkamp & Teddlie, 2008).

Wide Variety of Data Sources

As shown in Figure 2.1, educational data are proliferating and not only are educators being confronted with more and more data, but also with different types of data from multiple sources (Mandinach, 2012). The process of culling data for making instructional decisions can be both overwhelming and daunting for teachers (Wayman et al., 2012.) While many experts think teachers only analyze achievement data (Mandinach, 2012), it is clear through the literature that, in some contexts, teachers are collecting a wide variety of data (e.g., teacher-made assessments) in their classrooms on a daily basis in order to glean information regarding their students' performance in school (Datnow & Hubbard, 2015; Hoover & Abrams, 2013). What is less clear, however, is how they use these data as sources for information for their instructional planning. Surveying elementary, middle, and high school teachers, Hoover and Adams (2013) reported teacher-generated assessments, departmental common assessments, interim assessments, and norm-referenced assessments as the assessments they use and analyze to inform their practice. However, Hoover and Abrams shared that the teachers analyzed data less frequently than they collected them, and when they did conduct an analysis, the data were examined for the class average and nothing more. Mandinach (2012) posits that teachers use other information sources to understand their students' performance in their classes including medical records, behavioral data, attendance data, and transportation data. However, these are not used by teachers to adjust instructional practices. While these are all examples of data teachers have for their students, not all are relevant for informing next steps of instruction. This is the crux of the problem of practice that I explore throughout this capstone project: teachers use of assessment data specifically to support instructional decision making.

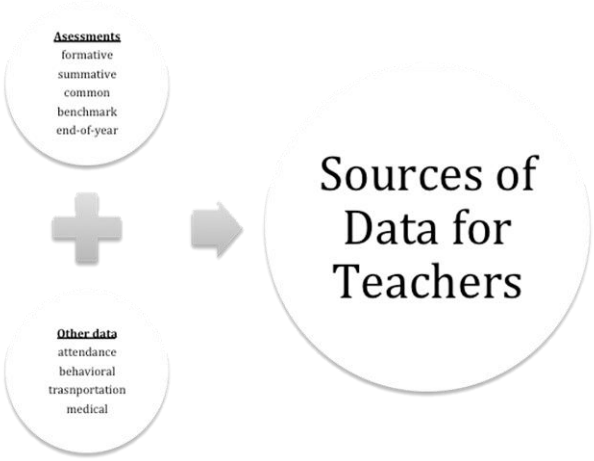


Figure 2.1*:* Sources of Data for Teachers

Defining "Using Data"

"Using data," is an interpretative process in which data must be accessed or collected, organized, and analyzed, for information. The resulting information is combined with understanding around the teacher-content expertise and the students' developmental stages to become meaningful and useful for actions (Coburn, & Turner, 2011; Mandinach, et al., 2008; Marsh, 2012). It is important to note that "using data" means different things to different people. The data teachers may use may differ. Teachers' interpretations of the data may differ. Even the same data may mean different things to different teachers. Some teachers will understand the data more in terms of simple statistical properties (e.g., class average), while others will need a narrative in order to fully understand.

Pedagogical Data Literacy

Parallel to data-based decision making is the awareness that all teachers must understand *how* to use tangible evidence from students rather than anecdotes, intuitions, or personal preferences to modify their instruction. Educators must have data-literacy

skills combined with pedagogical-content knowledge in order to inform their practice. Mandinach (2012) defines *pedagogical data literacy* as "[teachers'] ability to understand and use data effectively to inform decisions" (p. 30). Pedagogical data literacy implies a specific skill set and knowledge base that permits teachers to transform data into information and ultimately, into actionable knowledge about student learning (Mandinach & Gummer, 2013; Mandinach et al, 2008). These skills include knowing how to efficiently identify, collect, analyze, summarize, and most importantly, prioritize data (Mandinach et al., 2008) in order to identify problems, develop hypotheses, interpret the data and determine, plan, implement and monitor instructional courses of action (Mandinach & Gummer, 2013). The decisions that teachers use data to inform are multiple and quite diverse, therefore, having sound pedagogical data literacy skills are pertinent to making informed conclusions regarding student learning.

Using Interim Benchmark Assessment Data to Inform Instruction

My focus, however, is understanding how teachers use a specific data source, assessment data, to inform instructional-decision making. Although I restrict my discussion to teachers' use of data from assessments, specifically interim benchmark assessments, I also acknowledge that these data are only one form that teachers should use to inform their instruction (Datnow & Hubbard, 2015; Mandinach & Gummer, 2013). However, interim benchmark assessment data have the potential to inform how teachers plan lessons, identify concepts for reteaching, and differentiate instruction (Hamilton et al., 2009). Within the data-use movement, much of the focus to improve classroom instruction has been on teachers' use of formative and summative data, rather than interim benchmark assessment data. Most public school districts which engage in data

use have adopted or developed some type of interim benchmark assessments in recent years and have asked teachers to analyze and act upon the data from them (Datnow & Park, 2014; Hamilton et al., 2009; United States Department of Education (USDOE), 2010).

Defining Interim Benchmark Assessments

Teachers overwhelmingly report that they use interim benchmark assessment data almost exclusively to provide them information about their students' progress toward prescribed learning standards (Andrade, Huff, & Brooke, 2012; Brookhart, 2011; Datnow & Hubbard, 2015, Mandinach, 2012). *Interim benchmark assessments* are defined as those that assess student knowledge and skills in a limited time frame and can be easily aggregated across school and classroom populations (Datnow & Hubbard, 2015; Perie, et al., 2007). The frequency of interim benchmark assessments, which are typically administered two to three times a school year, is intended to track current students' progress toward learning standards (Datnow & H4ubbard, 2015; Hamilton et al., 2009). Such assessments are formalized and designed to provide information regarding student performance to teachers, administrators, as well as policy makers (Andrade et al., 2012).

Interim benchmark assessments are distinctive from end-of-year state assessments (Andrade et al., 2012). Interim benchmark assessments are not analogous to ongoing minute-by-minute, day-by-day classroom assessments administered by teachers in the course of teaching and learning activities (Andrade et al., 2012; Datnow & Hubbard, 2015; Bulkley et al., 2010). Rather, there is an underlying assumption that interim benchmark assessments are given after a longer segment of instruction and the data will be used in a formative way (Young & Kim, 2010). Interim benchmark assessments do

not occur within the context of instruction as a short quiz might, for example. Bulkley et al. (2010), describe interim benchmark assessments as "occupying a middle ground between formative assessments and summative assessments" (p. 117). Many interim benchmark assessments resemble end-of-year state assessments - with multiple-choice or short-answer questions - but have different goals (Bulkley et al., 2010; Datnow & Hubbard, 2015). They are used to examine how well students have mastered curriculum content by a particular point in the year. Christman, Neild, Bulkley Blanc, Liu, Mitchell, and Travers (2009) explain that interim benchmark assessments act as "checkpoints that help ascertain [teachers'] progress with the district curriculum and students' level of understanding" (p. 23).

The wide-scale adoption of interim benchmark assessments by schools or districts is supported by the belief that the assessments can contribute to the process of continual school improvement (Bulkley et al., 2010; Datnow & Hubbard, 2015). As Bulkley et al. (2010) noted, whether this occurs depends a great deal on how these data are actually used to inform instructional decision making at the classroom, school, and district levels.

Teachers' Analyses and Use of Interim Benchmark Assessment Data

Teachers use their pedagogical data literacy skills in the cyclical process of using interim benchmark assessment data to inform instructional improvement. The steps represent the ongoing nature of the cycle and include: (1) accessing and organizing assessment interim benchmark assessment data, (2) making sense of interim benchmark assessment data to identify learning problems and possible solutions, (3) implementing the interventions within the classroom context, and (4) assessing and modifying the interventions after reassessing to determine if the learning gap has lessened (Christman et

al., 2009; Cosner, 2011; Datnow & Hubbard, 2015; Datnow & Park, 2014; Hamilton et al., 2009; Mandinach, 2012; Bulkley et al., 2010). This process is often represented in a circular fashion to represent it as an ongoing cycle. For example, teachers in the Datnow and Park (2014), Hamilton et al., (2009), and Nabors Oláh et al., (2010) studies, consistently followed this pattern by logging into the district's data management system to access results from interim benchmark assessments, identifying weak points for the class as a whole or individual students, and considering instructional interventions. Teachers in these studies moved from analyzing the data to linking this analysis to curricular content, which was their district's expectations (Datnow & Park, 2014; Hamilton et al., 2009; Nabors Oláh et al., 2010).

Influencing Factors to Enable Interim Benchmark Assessment Data Use

In order for teachers to use interim benchmark assessment data to inform instructional changes, several enabling factors must be present. They include easy access to the interim benchmark assessment data (Coburn & Turner, 2012; Kerr, Marsh, Ikemoto, Darilek, & Barney, 2006; Mandinach et al, 2008; Means, Padilla & Gallagher, 2010; Schildkamp & Kuiper, 2010; Wayman et al., 2012), leadership support (Coburn & Turner, 2011; Datnow & Hubbard, 2015; Marsh, 2012; Means et al., 2010; Park & Datnow, 2009; Schildkamp & Kuiper, 2010), professional development (Coburn & Turner, 2011; Mandinach et al., 2008; Schildkamp & Poortman, 2015), and established data-use routines (Coburn & Turner, 2012; Feldman & Pentland, 2003; Spillane, 2012). In terms of enabling factors, each of the listed characteristics could warrant its own literature review. What I offer here is an overview of those factors most salient to my

problem of practice and directly informed my conceptual framework (and consequently, analysis).

Easy Access to Interim Benchmark Assessment Data

The structure of a data routine draws teachers' attention to interim benchmark assessment data. Therefore, the availability of those data matters for how routines unfold. As scholars point out, interim benchmark assessment data must be easily accessible, either through the technological infrastructure or the human infrastructure, for collection, storage, and retrieval (Coburn & Turner, 2012; Kerr et al., 2006; Mandinach et al., 2008; Means et al., 2010; Schildkamp & Kuiper, 2010; Wayman et al., 2012). The form and function of data reports, how data are delivered, when data are available, and whether or not teachers can make sense of analytic reports all impact whether or not they can use their pedagogical data literacy skills to turn the results of the interim benchmark assessments into information about student learning and future instruction (Spillane, 2012).

Kerr et al. (2006) found in their study that when the district-level leaders allowed teachers to have access to the online interim benchmark assessment data system, they not only had the ability to disaggregate the data, run item analyses, and display results in multiple formats but also, the opportunity to inform their instructional modifications in a timely way. In contrast, in schools where teachers had to make "data requests" to district-level leaders for their interim benchmark assessment results, opportunities to inform instructional decisions in a timely way were greatly diminished (Kerr et al., 2006). Means et al. (2011) recommended for school leaders to ensure teachers "have ready access to the [interim benchmark assessment] data in a form they can comprehend and

manipulate" (p. 2). Teachers overwhelmingly reported they wanted greater detail concerning individual students' strengths and weaknesses on the interim benchmark assessments, therefore, having access to generate customized reports was particularly useful for guiding instruction (Mandinach et al., 2006). Therefore, the availability of tools for teachers to store, retrieve, and analyze interim benchmark assessment data is critical for timely informed decisions.

Leadership Support

The school leader plays an essential role in teachers' use of interim benchmark assessment data to make instructional decisions for students. The school leader not only encourages, motivates, and facilitates teachers' data-analysis meetings but also, provides adequate time for teachers to gather, analyze, and interpret data in order to make decisions on the information gleaned from the process (Coburn & Turner, 2011; Datnow et al., 2013; Kerr et al., 2006; Marsh, 2012; Means et al., 2010; Park & Datnow, 2009; Schildkamp & Poortman, 2015). School leaders that were able to effectively use interim benchmark assessment data for inquiry and decision making were able to build a strong vision for data use in their schools (Coburn & Turner, 2011). Schildkamp and Poortman (2015) found school leadership participation was important for not only facilitation of the data meetings, but also for modeling effective data use and empowering teachers to use their interim benchmark assessment data to implement future instructional strategies. Ultimately, school leaders play a key role in establishing the norms of interaction by creating a climate of trust and risk taking, which enables teachers to share more freely and take the risks necessary to change their practice (Coburn & Turner, 2011). In addition, Schildkamp and Poortman (2015) also found:

> [t]he school leader can also have a negative effect on the data team where the school leader tried to use data to "shame and blame" teachers. The school leader needs to build a safe culture of inquiry that supports data-based decision making and where there is trust so teachers can ask questions and use data about practice and performance without the fear of repercussions. It is crucial that teachers feel empowered by data instead of threatened. (p. 35)

However, vesting all leadership for data use in one person may be problematic (Kerr et al., 2006). Several studies have found that the most successful principals in building a data-use culture were able to act as initial catalysts for data inquiry but then worked to create more distributed leadership around data use (Datnow et al., 2013; Marsh, 2012; Park & Datnow, 2009). Instructional coaches, department chairs, and lead teachers who were empowered to lead data meetings helped to build strong data-use culture within their schools (Mandinach, 2012).

Data-Use Routines

Although taken for granted, data-use routines can play a significant, yet subtle role in how the process of interim benchmark assessment data use unfolds. An *organizational routine* is defined by Feldman & Pentland (2003) as being a "repetitive, recognizable pattern of independent actions, involving multiple actors" (p. 95). I use Coburn and Turner's (2011) definition of *routines for data use* as the "modal ways that people interact with data and each other in the course of their ongoing work" (p. 181). Data-use routines centered around interim benchmark assessment data can be as informal as teachers submitting a data-analysis report for such assessments to the building-level principal or department chair (Coburn & Turner, 2011) to a more highly designed and structured formal meeting which are guided by protocols and facilitated by an instructional coach or principal (Spillane, 2012). The defining criteria for a data-use

routine, however, is defined best by Coburn and Turner (2011) as "[a] recurrent and patterned interaction that guides how people engage with each other and data in the course of their work" (p. 181).

Existing research suggests that data-use routines around interim benchmark assessment windows are a key context for data use because they "frame and focus interactions among school staff" (Spillane, 2012, p. 114). A data-use routine provides a structure for bringing together a group of teachers around a particular set of data and guiding their interactions through a logical process in order to turn the data into information (Coburn & Turner, 2011; Horn & Little, 2010). However the routine is configured, whether time of day, location of meeting, standardized agendas, and the structure allows for an organized way to gather specific teachers for data conversations (Coburn & Turner, 2011). The make-up of the group matters because it allows people to attend the meetings with different paradigms, which shapes how they interpret the interim benchmark data and the kind of discussions they have over the implications of the data for action (Coburn & Turner 2011; Spillane, 2012). Thus, to the degree that routines influence patterns of teacher interactions, they are important for turning interim benchmark assessment data into information but also, planning instructional interventions or extensions to support students' needs (Coburn & Turner, 2011; Spillane, 2012). Ultimately, in bringing together teachers to review their interim benchmark assessment data, their attention is focused and framed to interpret their data and define actions for future instructional sequences (Coburn & Turner, 2011; Horn & Little, 2010).

Professional Development (PD)

Professional development on the mechanics of data use to build teachers' pedagogical data literacy has the potential to shape the interpretative process of data-based decision making. When PD activities provide instruction on asking questions, selecting appropriate data, and drawing inferences, then teachers' pedagogical data literacy increases allowing them to make informed instructional decisions (Coburn & Turner, 2011; Mandinach et al., 2008; Schildkamp & Poortman, 2015). Supporting teachers through their development of pedagogical data literacy skills requires training opportunities that are geared toward their level of skill (Mandinach, 2012). Schildkamp and Poortman (2015) found that most teachers and school-based administrators were not able to analyze the collected data and had to be done by the data experts and researchers in their study. In addition, Schildkamp and Poortman (2015) found that teachers not only needed pedagogical data literacy skills but also, a high understanding of primary content knowledge in order to make decisions about instructional improvement. Schildkamp and Poortman (2015) describe this further as "data can help teachers to identify the conceptions and misconceptions of students, but teachers still need their primary content knowledge to determine how to alter their instruction accordingly" (p. 36).

Purpose of Capstone

As discussed in Chapter 1, for my capstone project, I was interested in creating a descriptive case study of five kindergarten teachers' approach to using assessment data, specifically, their interpretations of data and their instructional responses to them, within the context of literacy instruction. Through this examination, I sought to answer the following questions:

To what extent did the teachers in Piedmont County Public Schools use their literacy data (PALS-K as well as classroom assessment data) to adapt instruction in response to students' needs?

In what ways did teachers alter classroom goals or objectives or modify student-grouping arrangements based on their assessment literacy data?

To what extent do the organizational and political context of the school influence the process of teachers using data?

Chapter Summary

In the preceding literature review, I described the meaning of data-driven decision making and the factors that assisted teachers in building their pedagogical data literacy to analyze interim benchmark assessments and make instructional changes based on those data. Via this review of the literature, I provided the literature as background knowledge for my problem of practice, which is ultimately, how teachers used student interim assessment data to support instructional decision making, specifically adapted lessons or assignments in response to students' needs, altered classroom goals or objectives, or modified student-grouping arrangements. In the next chapter, I describe the methods I used to conduct this study.

CHAPTER 3: METHODS

As discussed in Chapter 1, the Research Team (RT) from the University of Virginia's *Curry School of Education and Human Development* received funding from the Spencer Foundation to carry out a research study on kindergarten teachers' data-use practices in the area of literacy. The purpose of my capstone project, was then, to examine the processes the teachers used to analyze their literacy assessment data. By examining, I sought to answer the following research questions:

In what ways did teachers alter classroom goals or objectives or modify student-grouping arrangements based on their assessment literacy data?

To what extent did the teachers in Piedmont County Public Schools use their literacy data (PALS-K as well as classroom assessment data) to adapt instruction in response to students' needs?

To what extent do the organizational and political context of the school influence the process of teachers using data?

In Chapter 1, I provided the background of the problem of practice as well as the conceptual framework which guided my project. In Chapter 2, I provided the relevant literature buttressing this project. In this chapter, I discuss the research design I employed, including the setting and participants, data sources, and data analysis.

Research Design

My conceptual framework (see Chapter 1) from which I utilized Coburn and Turner's (2011) framework for organizing research on data use, specifically *the process of data use,* is suggestive of my paradigm as a researcher. Because I believe "that human agency is crucial for shaping everyday lives and larger social patterns" (Rossman & Rallis, 2012, p. 39), I hold an interpretivist paradigm and approached my capstone project with that frame of mind. In addition, I believe the subjective experience supports the notion that "meanings are varied and multiple…and negotiated socially and historically" (Creswell, 2014, p. 8). Therefore, and consistent with my conceptual framework, my role as a researcher in this capstone project was to interpret the participants' meaning of it (Creswell, 2014; Rossman & Rallis, 2012).

For this capstone project, I examined a process of examining literacy data and the instructional decisions made from teachers analyzing the data, ultimately identifying patterns to that process. Therefore, I chose to conduct a qualitative descriptive case study that utilized existing data sources already collected as well as a follow-up interview where I collected data from the Director of Elementary Education for PCPS.

Table 3.1 describes the assessment data sources required of the kindergarten teachers to administer during the school year. The unit of analysis for my case study was the five elementary teachers at the one elementary school from the *A School Year in Kindergarten Classrooms: Literacy and Data Use Practices* grant. I describe the documents, setting, participants, data sources, and my data analysis in the remainder of this chapter.

Table 3.1: Assessment Data Sources Required of Kindergarten Teachers in PCPS

Type of Assessment Data	Purpose of the Assessment	Frequency
PALS-PK	PALS-PK (a modified version) was used during kindergarten registration to determine if students knew letters, sounds, and rhyme words. These data were used to create the kindergarten classes in the Fall.	Once – kindergarten registration
PALS-K (Fall)	PALS-K was administered four weeks into the kindergarten school year to form student groupings and establish list of students who qualified for Title I reading services.	Once – four weeks into the school year
PALS – K (midterm)	PALS-K was administered in January to the students who were identified on the Fall PALS-K as qualifying for Title I services or below identified benchmarks.	Once – in January
PALS – K (Spring)	PALS-K was administered in May to all students enrolled in kindergarten to determine yearly growth and assigning first-grade classrooms for the next school year.	Once – in May
Quick Checks	Quick checks are a brief measure used to monitor progress of a specific literacy skill. They were administered every Friday by the classroom teacher for each individual student.	Weekly
Formal Running Records	Formal running records are a way to assess a student's reading progress by systematically evaluating a student's oral reading and identifying error patterns. They were administered to	Every four to six weeks

	report on student progress toward literacy development	
Developmental Spelling Analysis (DSA)	A Developmental Spelling Analysis (DSA) is a screening inventory for determining a child's stage of orthographic development. A DSA was administered to students if they met or exceeded the benchmarks on the spelling component on the PALS-K.	Potentially three times after administering PALS-K.

Setting and Participants

As indicated in Chapter 1, *A School Year in Kindergarten Classrooms: Literacy and Data Use Practices* was conducted in Piedmont County Public Schools (PCPS)[4]. PCPS is located in Piedmont County[5], a mostly rural county located in the mid-Atlantic region of the United States. Although considered rural, Piedmont County is just south of a small metropolitan area, approximately 30 miles away. Piedmont County is approximately 504 square miles with 100.8 persons per square mile. The median income of Piedmont County at the time the data were originally collected was approximately $47,005 with 13.3% of the population living below the poverty line.

PCPS had approximately 7,900 students, each of whom attend one of its seven elementary schools, two middle, two high, or two combined schools. In terms of demographics, .4% identified as American Indian, 1.3% as Asian, 3.7% as Hispanic, 5.7% two or more races, 15.1% as Black, and 73.7% as White. Almost 200 (2.5%) were

[4] Pseudonym
[5] Pseudonym

English Learners, 911 (11.5%) were students with disabilities, and 3625 (45.9%) were economically disadvantaged.

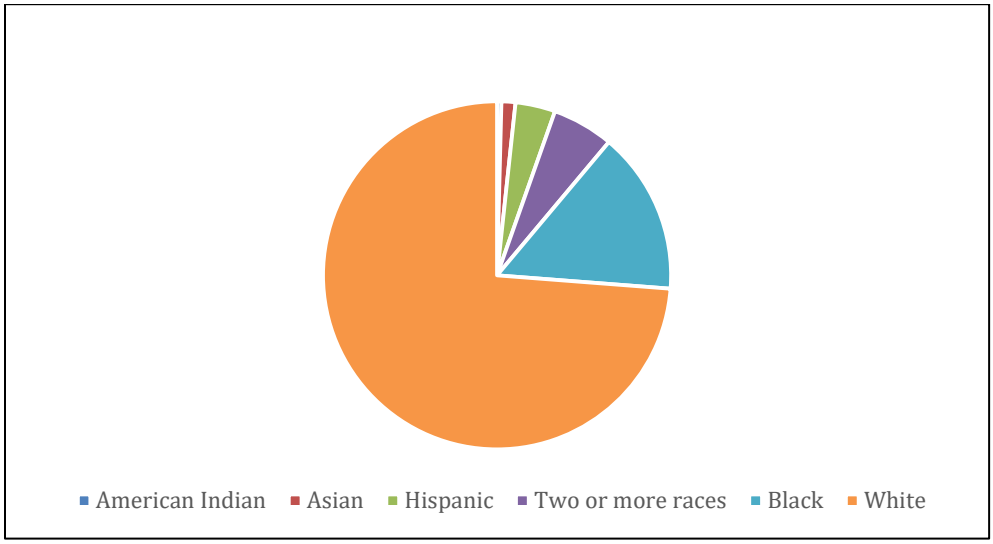


Figure 3.1. District-Wide Demographic Data: Ethnicity.

Because project researchers' interests were in investigating literacy instruction in kindergarten classrooms and teachers' data-use practices, the research was conducted at two of PCPS seven elementary schools, i.e., the Participating Sites (with the remaining five serving as controls). For this project, Blue Ridge Parkway Elementary School[6] (BRPES) is one of the two sites the research team investigated and the sole focus of my capstone. The demographic make-up of BRPES in terms of ethnicity was similar to PCPS as a whole. At BRPES, .6% identify as American Indian, 1.5% as Asian, 7.1% as two or more races, 9.7% as Black, 12.1% as Hispanic, and 68.8% as White. Similarly, BRPES economic disadvantage population was 42.4% and students with disabilities population was 11.8%. However, while there was not much difference between the district's and school's racial data, there was a slight difference in the English Learner

[6] Pseudonym

population. BRPES English Learner population was higher than the PCPS district, at 7.2% of the student body.

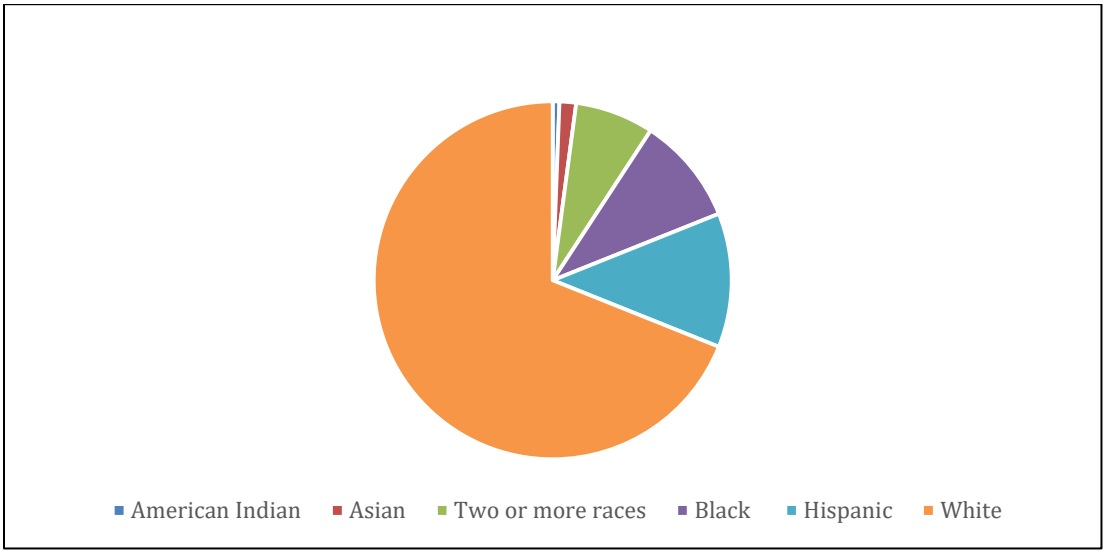


Figure 3.2. BRPES Demographic Data: Ethnicity.

My capstone project focuses on five kindergarten teachers at BRPES: Kerrighan "Kerri" Vaughnway,[7] Misty Lewis,[8] Christina Burns,[9] Bentley Anderson,[10] and Jamie Nottoway.[11] Mrs. Vaughnway had been a kindergarten teacher since 1995 and all of her experience has been in BRPES. Ms. Lewis began teaching in PCPS in 1992 in grades 7 and 8 before transferring to BRPES in 1995 to teach kindergarten. Ms. Burns began teaching at BRPES in 2012 as a first grade teacher, then transferring to kindergarten in 2013. Mrs. Anderson began working at BRPES in 2013 as a first-grade long-term substitute teacher, then moved to kindergarten in 2014. Finally, Mrs. Nottoway began teaching at BRPES in 2008, as a third, then fourth grade, teacher, and moved to

[7] Pseudonym
[8] Pseudonym
[9] Pseudonym
[10] Pseudonym
[11] Pseudonym

kindergarten in 2012. All five kindergarten teachers at BRPES majored in elementary education as undergraduates and two had Master's Degrees in Curriculum and Instruction. While my unit of analysis was the team of five kindergarten teachers at BRPES, I also chose Ms. Kellie Woodard[12], Director of Elementary Education for PCPS as well as Ms. Kimberly Huffman[13], principal of BRPES, in order to understand how the organizational and political structure of district- and school-based leadership influenced the kindergarten teachers' data decisions. Ms. Woodard was an elementary teacher and principal before assuming her role four years earlier as a district-level leader at PCPS. Similarly, Ms. Huffman was both a special education teacher and elementary principal before accepting the position of principal at BRPES three years ago.

I chose these teachers, administrators, and to an extent – this site, for several reasons. First, I knew I would be relying on archival data (hereinafter described) and I wanted to have some familiarity with the data that had already been collected. Having reviewed the observation field notes from the BRPES site prior to proposing my capstone project, I found the notes to be both easy-to-read and exceptionally thorough. The notes descriptively captured the environment, activities, and interactions (Rossman & Rallis, 2012), which allowed me to detect patterns within the teachers' processes of examining literacy data and the instructional decisions made from their analyses. In addition, the "material culture" (Rossman & Rallis, 2012, p. 196) of BRPES was well-documented by the research team members. The Think-Aloud-Protocols (TAPs) painted a thick, rich description of the conversations during individual data meetings between a RT member and a kindergarten teacher.

[12] Pseudonym
[13] Pseudonym

Second for, as Patton (2002) notes, when sampling, researchers should consider "what case they could learn the most from" (p. 233). When considering a sample for my capstone project, I wanted to find a school district that was similar to my own in terms of size, demographics, and enrollment statistics. Although PCPS is larger than my school district, BRPES is very similar in size to my district's largest elementary school with close to the same demographics and enrollment statistics. Having reviewed the BRPES observation field notes, I developed a preliminary sense of the aforementioned five kindergarten teachers' roles in examining literacy data and the instructional decisions made from their analyses. Similarly, these teachers *did* follow a similar pattern of noticing, interpreting, and constructing implications prejudiced by the organizational and political culture of the school and district as described in Coburn and Turner's (2011) *Process of Data Use,* which was of particular interest to me. Thus, I knew I would have instances of teachers analyzing their literacy assessment data to examine, and my preference was to examine the existence of, as well as the absence of, such analyses. Hypothetically, I aimed to study a case that I would be able to not only address the grant-specific problem of practice, but my own problem of practice of understanding teachers' assessment data-analyses process, in order to possibly contribute to the research of the broader, teachers' data-use problem of practice.

Finally, I chose to conduct a follow-up interview with Ms. Kellie Woodard, Director of Elementary Education for PCPS, to understand the organizational and political context that potentially influenced the data-analysis routines and processes of the five kindergarten teachers. My interaction with Ms. Woodard was very enlightening in both the history of PCPS' endeavor of shifting teachers from *collecting* literacy

assessment data as a task to check off a "to-do" list to *analyzing* those data to make instructional decisions based on the information they gleaned about student learning.

Data Sources

For my capstone project, I relied on both archival and newly-collected data. These sources included: initial interview transcripts, Think-Aloud-Protocols (TAPs), observational field notes, and documents. I describe these sources, as well my own notes about them, in the paragraphs that follow.

Initial Interview Transcripts (Archival)

During this project, two, semi-structured interviews were conducted by the research team of both school- and district-based administrators. The Director of Elementary Education for PCPS, Ms. Kellie Woodard, was interviewed as well as the building-level principal of BRPES, Ms. Kimberly Huffman. The building-level principal interviews took place twice during the school year to discuss how she noticed and interpreted the PALS-K data as well as the constructed implications she would recommend for future instruction. In addition, the RT inquired about school policies, district initiatives, and school-level administrative mandates relevant to literacy instruction and data use in the kindergarten classrooms. The Director of Elementary Education interview took place in April 2015, similar to an "exit-interview" on the project for the academic year. During this interview, the RT specifically asked questions about district policies and initiatives as they related to literacy instruction and the formal mechanisms in place at the school level for teachers to analyze their literacy assessment data with other colleagues. The separate interviews of Ms. Woodard and Ms. Huffman took place for approximately one hour. The interviews were recorded and professionally

transcribed. Upon receipt of the transcript, the researcher-interviewer reviewed it for accuracy. Like the observation field notes, the transcribed interview was archived in a dedicated and protected file within the university's "collab" site, which I had access.

Think-Aloud Protocols (TAPs) (Archival)

For this project, TAPs were used three times during the academic year to explore teachers' thought processes as they related PALS-K data or other assessment "data" to address overall trends in their literacy-assessment data and to individual students' strengths and weaknesses. The research team developed the TAP interviews based on literacy instruction, student learning, current policy, and organizational-decision making. Questions for literacy teachers were designed to focus on how they were able to maximize students' literacy development, their role as literacy instructors, decision-making circumstances such as specific content to teach to students, grouping configurations, how to maximize a student's capacity to learn to read, and how to know when an intervention was successful. For the administrators' questions, the interview protocols centered on policies and organizational structures around literacy instruction. Each TAP was conducted immediately after each statewide PALS-K testing window. Through the TAPs, teachers' behaviors and actions were noted through the cognitive processing of the scenarios (Jääskeläinen, 2010).

TAP#1. TAP#1 occurred immediately after the teachers received their results from the fall administration of PALS-K. For this meeting, teachers were instructed to bring their PALS-K summary reports and be prepared to discuss their students' performance. In addition, the RT had a copy of each respective teacher's Fall PALS-K report prior to each meeting. During TAP#1, members of the RT asked teachers to

describe what they notice about their data, as well as, to interpret the results, and construct implications for the next stages of instruction based on their results' interpretations. Questions for the teachers were open-ended, designed to spark a discussion, and included prompts such as:

> "So what do you look at to form your groups, exactly? You mentioned that you had formed three groups. Can you talk to me about how you used these data to do that?" (TAP#1 Interview, Vaughnway, October 20, 2014)

Appendix D provides the semi-structured protocol used by the RT to solicit the thought processes from the kindergarten teachers. I used the data from TAP#1 to answer my first research question in my capstone project.

Concept of Word Class Summary Report. It is important to note that all teachers brought their Concept of Word (COW) Class Summary report sorted, from the highest scores to the lowest, to determine how students would be placed into one of the three instructional reading groups. The COW portion of the PALS-K is designed to measure how students accurately use words in a memorized rhyme, use context to identify individual words within a given line of text, and identify words presented outside the text (PALS-K Assessment Instrument Description, para. 9, n.d.). Students are taught a nursery rhyme in advance of the PALS-K assessment and the COW is assessed "using a picture sheet of the rhyme, as well as pointing and word identification in the context of a small book format and then a word list" (PALS-K Assessment Instrument Description, para. 9, n.d.). Students receive a score on the COW portion of the test by adding the correct responses on the task to create a summed score (PALS-K Assessment Instrument Description, para. 9, n.d.). The summed score for each student is compared against a benchmark that represents minimum expectations for Fall and Spring. If a student's

summed score is below the benchmark, PALS recommends that the student receive specific instruction to develop the fundamental COW literacy skill (PALS-K Assessment Instrument Description, para. 9, n.d.). Table 3.2 lists the PALS-K benchmarks and mid-year ranges including the stage correlations for COW (PALS-K Benchmarks and Mid-Year Ranges, n.d.).

Table 3.2**:** *PALS-K Benchmarks and Mid-Year Ranges with Stage Correlations*

PALS-K Task	Individual Task Benchmark (Fall)	Mid-Year Range	Individual Task Benchmark (Spring)	Maximum Score
COW	0	3-10	7	10
Stage Correlations for COW	0-3 Developing	4-7 Rudimentary	7-10 Firm	

Word Recognition in Isolation Class Summary Report. One kindergarten teacher brought the Words Recognition in Isolation (WRI) report from the Fall PALS-K administration to the TAP#1 interview. The WRI component of the PALS-K assessment is *optional* and measures a student's ability to read words accurately when their recognition is not supported by other words in a reading passage (PALS-K Assessment Instrument Description, para. 9, n.d.). WRI can be administered to students who have some reading ability and pre-primer, primer, and first-grade level lists are provided to teachers for this assessment component (PALS-K Assessment Instrument Description, para. 9, n.d.). Students' scores on the WRI are added together to create a summed score. Table 3.3 lists the benchmarks on the PALS-K for WRI.

Table 3.3**:** *PALS-K Benchmarks for Word Recognition in Isolation (WRI)*

PALS-K Task	Individual Task Benchmark (Fall)	Mid-Year Range	Individual Task Benchmark (Spring)	Maximum Score
WRI (optional)	NA	NA	NA	20

TAP#2. After the mid-year administration of the PALS-K interim benchmark assessment, teachers were asked to bring to the meeting literacy assessment data on three students in which they thought were below, on, or above grade level in literacy development. The teachers were not specifically asked to bring their PALS-K mid-year results, but rather, asked in general to bring literacy assessment data to the TAP#2 interview. However, only two teachers were included in the field notes and only a summary of the discussion was included in the data corpus, not the actual transcript. Therefore, I decided not to use TAP#2 as data in my capstone project as I was unable to triangulate their responses with other pieces of data such as lesson plans or classroom observations.

TAP#3. In the final think-aloud meeting, which was after the spring administration of PALS-K, teachers were asked to bring literacy assessment data that would allow them to talk about their students to the first-grade teachers about their students' literacy development. They were not specifically asked to bring the Spring PALS-K results. In addition, the teachers were asked to give advice as to how instruction should remain the same or change based on their instructional needs as presented by those data. Appendix E provides the semi-structured protocol used by the RT to solicit thought processes from the kindergarten teachers. Again, questions for the Kindergarten teachers were open-ended, intended to spark discussion, and included such prompts as:

> "So just thinking about all of this and everything through the semester, what is data and data use mean to you? When you think about data and what it means to you, and then how to do you use it? How would you share these data with the first grade teachers?" (TAP#3, Lewis, May 6, 2015)

These interviews were recorded for each teacher by members of the RT and professionally transcribed. I used the data from TAP#3 to answer my first research question.

PALS Class Summary Report. In TAP#3, all five kindergarten teachers used their Class Summary Report to determine if students met the end-of-year benchmark to be prepared for first grade. Table 3.4 lists the PALS-K benchmarks for Fall and Spring. Mid-Year ranges are not benchmarks, rather, indications of where students, who are on grade-level by the end of the year, typically perform at mid-year (PALS-K Benchmarks and Mid-Year Ranges, para. 11, n.d.).

Table 3.4**:** *PALS-K Benchmarks and Mid-Year Ranges*

PALS-K Tasks	Individual Task Benchmark (Fall)	Mid-Year Range	Individual Task Benchmark (Spring)	Maximum Score
Group Rhyme Awareness	5	9-10	9	10
Group Beginning Sound Awareness	5	9-10	9	10
Individual Rhyme Awareness	5 (Required if the Group Rhyme is below the benchmark)	9-10	9 (Required if the Group Rhyme is below the benchmark)	10
Individual Beginning Sound Awareness	5 (Required if the Group Rhyme is below the benchmark)	9-10	9 (Required if the Group Rhyme is below the benchmark)	10
Lower-Case Alphabet Recognition	12	23-26	24	26
Letter Sounds	5	17-26	21	26
Spelling	2	10-20	13	20
Pointing	2	---	5	4(fall) 5(spring)
Word ID in Context	2	---	9	8(fall) 10(spring)
COW Word List	0	3-10	7	10

Word Recognition in Isolation (Preprimer, Primer, and 1st Grade Word Lists)	(Optional Task)			20 per word list
Summed Score Benchmark	29	No summed score benchmark	83	102

Observational Field Notes (Archival)

In addition to TAPs, five members of the RT conducted three classroom observations during the school year: September, October, and December. While the RT developed an observational protocol for their visits to the classroom to record teacher-student interactions as well as their reflections, they also allowed individual observers to record their annotations on a running record. These observations were recorded by the RT during literacy instruction and included such items as teacher directions to students, teacher behaviors, student responses, interactions among staff in the classrooms and instruction during student-literacy groups. In addition, the research team included descriptive information regarding the context of the classrooms. I provide a copy of the observational protocol in Appendix F.

Nuances of the Observers. After reading each of the classroom observations, I created Table 3.5 to provide information about the observers. In order to be completely transparent, I wanted to answer the following questions about the collection of these data including:

- How many observations did each observer complete?
- Did the observer use the observation protocol that was established as a recording instrument early in the project?
- If the observation protocol was used as a recording instrument, were the reflection questions at the end completed?
- If the observer did not use the observation protocol to record the observation, what was used to record the data?

- Did the observer provide a thick, rich description of the events during the observation or a less thick description?

***Table 3.5*:** Nuances of the Observers in *A School Year in Kindergarten* Study

	Observer A	Observer B	Observer C	Observer D	Observer E
# of observations completed for the study	5	7	5 (Note: While Observer D noted that Observer C were involved in 5 observations, there are only 5 written reports for Observer C.	15	5
Use of the observation protocol	5	7	0	5	0
# of observations with reflection questions fully completed at the end of protocol	0	5 * (responses were only one-word answers such as "yes" or "no")	0	0	0
If no observation protocol, tool used instead	n/a	n/a	Running record but no analytical records	Running Record but no analytical records	Running Record but no analytical records
Type of description provided through the observation notes	Minimal, shallow description	Some were more thorough than others but overall, minimal shallow description	Minimal shallow description and no detailed accounts of the events in the classroom	Thick, rich description of minute by minute happenings	Thick, rich description of minute by minute happenings

First, I noticed that most observers did not use the established observational protocol. During the first two rounds of observations, the protocol was used. I noticed that as the observations continued through the year, a running-record format was used for the observer to write their observations freely. After consulting with the principal investigator on the project, the RT found the original protocol to be too cumbersome so they transitioned to the running-record format for each observation. As a result, the descriptions were much more detailed and provided the reader with many details of the happenings in the classroom.

Next, I noticed that Observer A provided the most minimal information regarding the observations as there were no post-observation reflection questions answered. Therefore, I cannot say with fidelity that the researcher went back into her notes and thought about the implications of what was collected. Observer B completed the post-observation reflection questions but with one word answers such as "no" or "yes." There were no parsed out written thoughts included from what was observed and then reflected. In addition, Observer B was inconsistent in the descriptions provided as some were very detailed and others were minimal. Because Observer A and B were together during the first round of observations, their descriptions did not provide a lot of data as to what was happening during instruction. Observer D did not complete any post-observation reflection questions either when using the observational protocol. Overall, Observers D and E provided the thickest description of the happenings within the classrooms during their observations.

Lesson Plans (Archival)

The lesson plans collected by the RT of the kindergarten teachers' literacy instruction served as a rich source of data for my capstone project. The RT collected lesson plans three times during the school year: September, October, and December. Not all teachers provided the RT with lesson plans for all three collection months, however. Table 3.7 lists the number of lesson plans I had for each respective kindergarten teacher. Teachers' lesson plans consisted of procedures, materials, and assigned student work for each of the leveled-literacy groups. The lesson plans served as a primary source of data for my findings in response to my second research question. All five kindergarten teachers used the same template, which is provided as Appendix G.

Follow-Up Interview Transcript

Based on my literature review and conceptual framework, as well as my analysis of the foregoing data, I conducted a follow-up, semi-structured interview with Kellie Woodard, Director of Elementary Education for PCPS. The purpose of this follow-up interview was to inquire about the central office expectation for literacy data analyses and instructional changes that follow. In addition, I inquired about characteristics that influenced teachers' instructional decisions based on the information from TAP#1 and TAP#3 as well as other patterns that emerged from my initial analysis of the archival data sources. Prior to the interview, I developed an interview protocol. After I wrote my initial draft of the protocol, I sought additional guidance from a peer-reviewer. The semi-structured interview protocol I used is Appendix B.

The interview lasted approximately 90 minutes and was audio recorded with participant permission using an audio-recording device. In addition, I had the audio-recording professionally transcribed, and upon receipt of the transcript, I checked for accuracy.

Summary of Data Sources

As shown above, I drew upon multiple archived data sources: initial interviews, TAPs, observational field notes, lesson plans, and a follow-up interview. Table 3.6 (below) demonstrates the data sources I used to answer each respective research question in this capstone project.

***Table 3.6*:** Data Sources Used to Address Research Questions

Research Question	Initial Interviews	TAPs	Observational Field Notes	Lesson Plans	Follow-Up Interview
To what extent did the teachers in Piedmont County Public Schools use their literacy data (PALS-K as well as classroom assessment data) to adapt instruction in response to students' needs?	X	X			
In what ways did teachers alter classroom goals or objectives or modify student-grouping arrangements based on their assessment literacy data?			X	X	
To what extent do the organizational and political context of the school influence the process of teachers using data?	X	X			X

Data Analysis

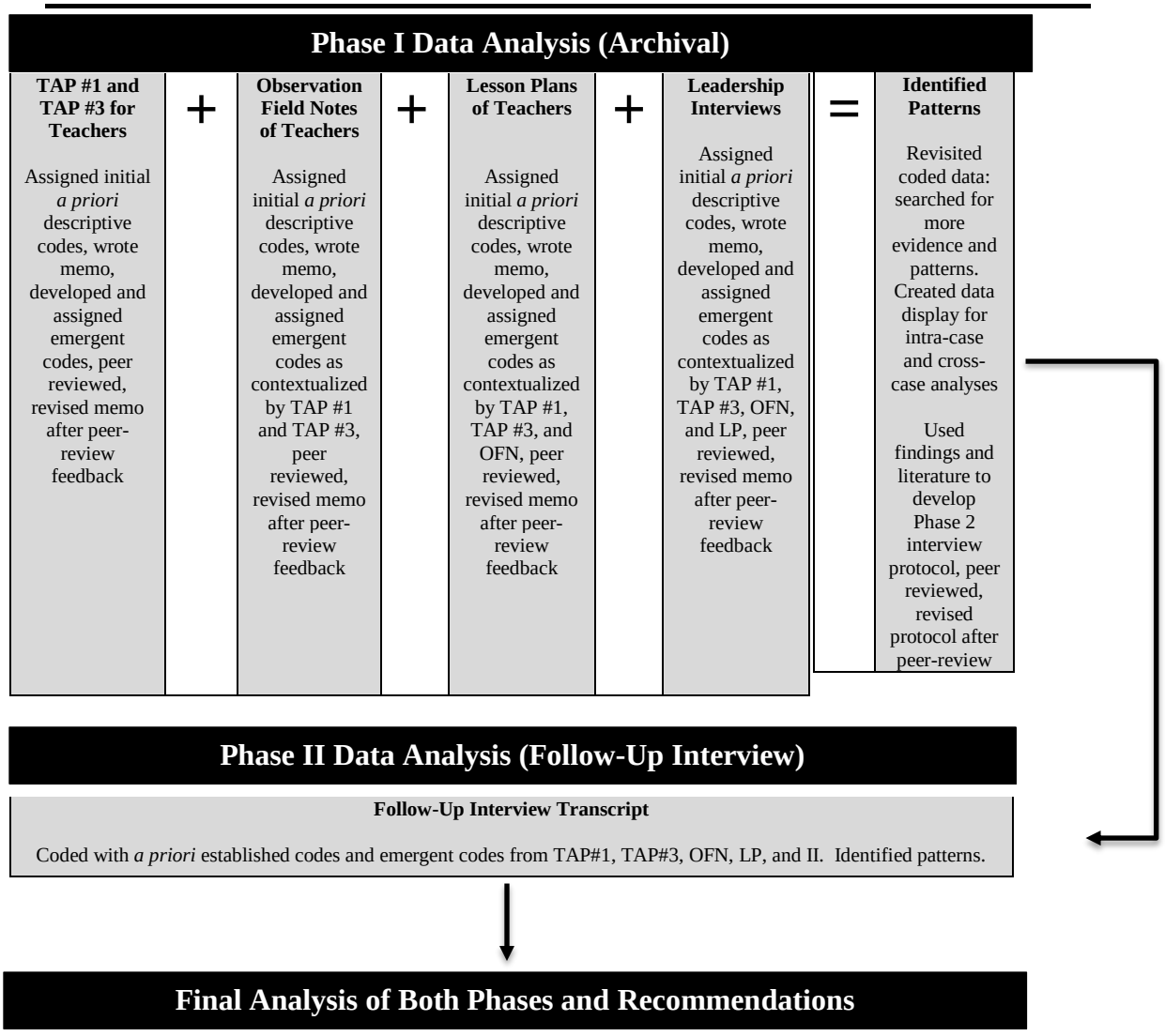
To make sense of the aforementioned data, I employed *qualitative analysis.* Miles and Huberman (1994) describe a qualitative analysis as being "three concurrent flows of activity: data reduction, data display, and conclusion drawing/verification" (p. 10). Initially, I anticipated my data analysis consisting of two dynamic phases that occurred linearly, which is shown in Figure 3.3 (below).

***Figure 3.3*:** Original Data Analysis Plan for My Capstone

PHASE 1 DATA (ARCHIVAL)									Phase 2 Data
Observation Field Notes Assign initial *a priori* descriptive codes, memo, develop and assign emergent codes.	+	**Initial Interviews** Assign initial *a priori* descriptive codes, memo, develop and assign emergent codes as contextualized by the OFN	+	**Lesson Plans** Assign initial *a priori* descriptive codes, memo, develop and assign emergent codes as contextualized by OFN and II	+	**TAPs** Assign initial *a priori* descriptive codes, memo, develop and assign emergent codes as contextualized by OFN , II, and LP	=	**Identify Patterns** Revisit coded data: look for more evidence and patterns. Create data display for intra-case and cross-case analyses Use findings and literature to develop Phase 2 interview protocol	**Follow-Up Interview Transcript** Code based on both existing patterns/themes and those consistent with the literature, memo, and develop and assign emergent codes if/as necessary.

Consistent with the foregoing plan, my analysis *did* occur in two dynamic phases; however, I realized early on that I did not want to read all of the observation field notes first before I read each transcript of TAP#1. Therefore, I began with all of the responses from TAP#1, assigned initial *a priori* codes, and noted emergent codes from that analyses. My analysis was both inductive and deductive, depending on the step of the analysis. Figure 3.4 reflects my modified plan, which I describe more thoroughly in the sections that follow.

Figure 3.4: Final Data Analysis Plan for My Capstone



In the next few sections, I describe each of those steps. I articulated the consistencies and meanings I identified as *patterns* i.e., descriptive findings (Patton, 2002, p. 453). The patterns that I classified can be seen throughout my Chapter 4: Findings.

Step 1: Initial *A Priori* Coding and Emergent Coding of the Data Corpus

My first step in analyzing the data corpus was a deductive analysis of TAP#1, TAP #3, observation field notes, and lesson plans for each kindergarten teacher. In order to determine how many pieces of evidence existed for each teacher, I decided to create a matrix to contain the teachers, evidence, and quantity I had for each. Table 3.7 contains this analysis.

Table 3.7: Matrix of Pieces of Evidence by Teacher

Teacher	TAP #1	TAP #3	Observation Field Notes	Lesson Plans	Total Pieces of Evidence
Bentley, Anderson	1	1	7 (5 observers)	3	11
Burns, Christina	1	1	7 (5 observers)	3	11
Lewis, Misty	1	1	8 (5 observers)	1	11
Nottoway, Jamie	1	1	8 (5 observers)	2	11
Vaughnway, Kerrighan	1	1	7 (5 observers)	2	10

In addition to the data for the kindergarten teachers, I analyzed the initial interviews in the data corpus for the building-level principal and district-level Director of Elementary Education. In order for me to manage the pieces of evidence for the leadership, I made a matrix to organize them. Table 3.8 contains this evidence.

***Table 3.8*:** Matrix of Pieces of Evidence by Leader

Leader	Fall Interview	Spring Interview	Total Pieces of Evidence
Huffman, Kimberly	1	1	2
Woodard, Kellie	0	1	1

***A Priori* Codes.** According to Patton (2002), "[d]eveloping some manageable classification or coding scheme is the first step of analysis" (p. 463). Likewise, Bazeley (2013) suggests the preliminary coding system involves "identification and labeling…using *a priori* or emergent codes" (p. 126). At the beginning of my capstone project, I developed *a priori* codes based on Coburn and Turner's (2011) conceptual framework of teachers' data-use processes. Therefore, after a first-read of each artifact in the data corpus, consideration of my research questions, conceptual framework, and problem of practice I created a *codebook*, i.e., a digest (Beazeley, 2013, p. 240), of six descriptive codes used to label applicable portions of text.

Peer-Review Session #1. Once I developed my draft of six *a priori* codes, I shared it with my peer reviewer. In choosing a peer reviewer, I first thought about asking members of the original *A School Year in Kindergarten* RT. However, everyone that was involved in the project left Curry, and I was unable to contact any of them besides the principal investigator. Therefore, I chose a colleague of mine who was working on his doctorate from another university. My colleague was in the final stages of dissertation writing and had been through the necessary courses of qualitative analysis to understand the issues of credibility and trustworthiness. After each of our peer-review sessions, I created an analytic memo detailing not only the outcomes of our time together but also the protocol I used to guide our discussions. Below is a specific example of a peer-

review session in which we grappled with the idea to add more *a priori* codes or contend with the original list:

> During our discussion, my peer reviewer asked why I chose "routines," "access to data," and "leadership" from the *Organizational and Political Cultures* of the CF and disclude "time," "norms," and "power relations." At that point, I really didn't have an answer to the question. If my research question #3 asks about how the organizational and political cultures of the school influence the process of teachers using data, then I couldn't really think of a reason as to why NOT to include them. So, I considered definitions for these codes and add them to my *a priori* code book. Therefore, at this point, my *a priori* codes changed from 6 to 9 to include "time," "norms," and "power relations." For the definitions of those codes, I looked back in my Literature Review to read how Coburn and Turner (2011) defined those terms. So in thinking about "time," "norms," and "power relations," I generated the following definitions of these codes and took them back to my peer reviewer. The definitions I generated were:
>
> > *Time = the measured or measurable period during which the process of data analysis existed; took place*
> > *Norms = the standard of behavior that is typical of the people within the data-analysis group*
> > *Power Relations = the power of the administration/organization to have influence over the data-analysis process*
>
> Once I went back to my peer reviewer, we had a lengthy conversation about these three additional codes and looked at my original *a priori* codes. We decided together, that these three additional codes really rallied around the *leadership* code I had originally created which was:
>
> > *Leadership = influences of allocating time, fostering norms of interaction, and participating in data-use routines*
>
> Therefore, both of us felt we had captured time, norms, and power relations within this general code of *leadership* and left the original *a priori* codes intact. To answer my research question of "*To what extent does the organizational and political context of the school influence the process of teachers using data?*" we both felt that in a school setting, routines, access to data, and leadership were the essential components to answering this question. As of the writing of this memo, the original 6 codes were left intact as the *a priori* codes for which to begin analyzing the data corpus. (Analytic Memo #2, December 11, 2018)

Emergent Codes. Once my initial codebook was finalized with the six *a priori* codes, I applied these codes to my careful reading of each piece of evidence I had in the

data corpus. Ideas began to emerge in the data that allowed me to develop emergent codes. After reading and applying all six *a priori* codes to each piece of evidence, I created an additional 33emergent codes based on specific terms teachers used in their discussions with the RT. In the interest of transparency, I provide my initial codebook of six codes as well as my emerged codebook of 33 codes in my descriptive codebook in Appendix C.

Peer-Review Session #2. At this point in my analysis, my codebook contained 39 codes. I then returned to my peer reviewer and asked for feedback on my emergent codes as surfaced as a result of my initial analysis. During our session, we wrestled with the code "attention disorders." Below is a summary of our discussion and conclusion with this emergent code:

> Together, we discussed the aforementioned codes together to determine if they "fit" what I am noticing in the data and considered changes that I needed to make based on our conversation. We both decided that all of the codes looked okay at this point in the analysis, but that "attention disorders" was a bit harsh to use as an emergent code. After a heavy discussion of what "attention disorders" actually entail, I explained that is the term *teachers* used when describing their students' behavior and if I changed it, I may lose or change the context from what they intended to mean. Therefore, we left "attention disorders" the same, but in my Code Book, I revised the definition to read *Kindergarten teachers at Blue Ridge Parkway Elementary used the term attention disorders to describe students who portrayed inattentiveness during reading instruction.* (Analytical Memo #4, January 4, 2019)

Analytic Memoranda. As noted in Figure 3.4 as well as the preceding subsections, I wrote analytic memoranda to "make observations or record thinking that is more detailed or more reflective than that usually found in brief annotations or marginal comments" (Bazeley, 2013, p. 103). These memoranda allowed me to capture my thoughts regarding the emergent codes as well as patterns that arose out of my data

analysis. Specifically, my analytic memoranda provided me the opportunity to analyze the TAP#1 interview and conceptualize my thoughts. At the conclusion of the first step of data analysis, I not only applied 1,800 codes across each piece of evidence in the data corpus interviews but also had written nine analytic memoranda from which I could pull information as I moved into my second step of data analysis.

Step 2: Identifying Patterns in the Data

The second step of my data analysis involved an inductive process of refining the initial patterns that emerged from step one in data analysis. Bazeley (2013) describes *pattern coding* as, "a level of coding that is more inferential and explanatory" (p. 235). Meaning, pattern coding is "applied in the analysis process when the significance of particular comments or observational notes becomes evident to the researcher" (p. 235). To capture those patterns, I reread my analytic memoranda from my first step in data analysis and created another level of memos in which I called "analytic pattern memos."

Analytic Pattern Memos. As I continuously revisited my first step analytic memoranda, as well as the data themselves, I discovered initial cursory patterns. I created pattern memos to record these findings, which encouraged me to iteratively and to recursively develop my tentative patterns until they began to solidify themselves to answer my first and second research questions. An example of an excerpt from a pattern memo can be seen below:

> All five teachers stated they were only allowed to have **three instructional reading groups** and that there were students in the high group and low group that needed to be in different instructional groups because they were either too high or low for the group. One of the five kindergarten teachers stated that her **outliers** were not receiving the individual instruction they needed based on their data. (Analytic Pattern Memo #8, January 9, 2019)

Tables and Figures. Throughout my analytic pattern memos, I created many tables capturing the various patterns I saw in the data. Creating these tables helped me visually see the patterns across the pieces of evidence. In fact, I used many of these tables and figures in my findings (Chapter 4) because they provided concise representations of what I saw in the data corpus.

Step 3: Follow-Up Interview

I conducted a follow-up interview of Ms. Woodard on February 15, 2019, and it served as the beginning of Phase 2 in data collection and analysis of my capstone project. The purpose of this follow-up interview was to inquire about the kindergarten teachers' perceptions of building- and district-level literacy mandates that influenced their data-analysis processes. In addition, I wanted to explore the patterns that emerged from my Phase 1 (Steps 1 and 2) of my analysis of the archival data sources. After conducting the interview, I listened to the audio version of it and created a set of analytic codes from possible segments of our discussion that could serve as possible analytic codes (see Appendix G) while I waited for the transcription. Once I received the professional transcript, I began to solidify my findings and recommendations, and applied my analytic codes to them. This process served as a final "check and balance" of what I had already summarized in my analytic codebook as well as in my findings and recommendations. I was able to make revisions and fine tune my writing to ensure clarity and brevity.

Step 4: Final Analysis of Both Phases of Data Analysis and Recommendations

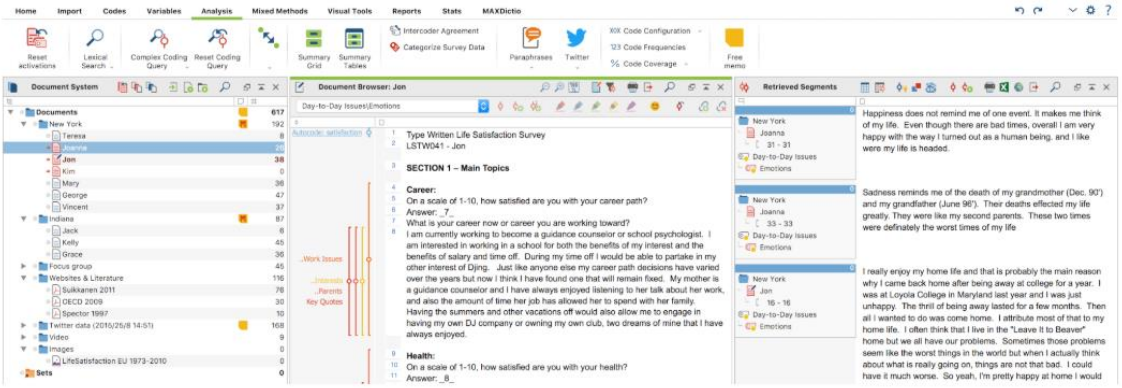
Upon conclusion of analyzing data from Phases 1 and 2 of my capstone project, as stated above, I read and re-read the patterns that emerged to make final decisions about my findings and recommendations for this capstone project. When thinking about the

organization of the patterns for each research question, I decided not to collapse or shorten them, rather, to include each pattern as it presented in the data analysis for each research question. Ultimately, I wrote a case study with abounding descriptions and quotes which demonstrated each pattern for each research question. I share my patterns in Chapter 4, as well as recommendations to Ms. Kellie Woodard, which I share in Chapter 5.

Use of Software

To assist me in my data analysis process, I utilized MAXQDA, a software program to aid in qualitative research coding. MAXQDA allowed me digitally to "import, organize, analyze, visualize, and publish" the data the RT collected and included in the original data corpus (MAXQDA, para. 1). I imported all of the documents in the data corpus into MAXQDA, as well as my initial codebook of *a priori* codes. I used the MAXQDA software to assign my initial *a priori* codes to segments of text. Doing this allowed me to pull specific sections of text that were aligned with specific *a priori* codes so I could see where there might be overlaps. This process allowed me to identify the emergent codes within my data as well as patterns within the data.

***Figure 3.5*:** MAXQDA Software Image from Website



Trustworthiness

Because my project lies within the realm of qualitative research, the researcher *is* the instrument (Patton, 2002). In quantitative research, validity and reliability serve as quality-point indicators, however, in qualitative research, it is trustworthiness (Golafshani, 2003). Trustworthiness ensures that the means and the process by which the data are collected and analyzed are sound (Golafshani, 2003). I endeavored to establish trustworthiness in this project in a variety of ways. First of all, I was not part of the original project, therefore, have no pre-conceived ideas or assumptions toward the data, people, or setting within this study. Next, I relied on the detailed observation field notes from the TAPs, classroom observations, and interviews of respective leadership members provided by the research team. In my follow-up interview, I audio recorded the event and had the interview professionally transcribed. Then, I reviewed the audio recording to check the transcript for accuracy. In addition, the follow-up interview provided me with the opportunity to member check.

Original Codebook. The original codebook of this project was jointly created by the RT on the *A School Year in Kindergarten*. *Project.* First, the graduate research assistants created the initial codes that were then checked by the principal investigators on the project (see Table 3.9 below).

Table 3.9: *Research Team's A Priori Start Codes*

Code	Description
Assessments	Formal Assessments • Summer assessment • Teacher "Friday" assessment Informal Assessments • conversations with kids ○ for action

	○ feedback to students ○ for more questions to students to redirect • students showing Recording and Data Collection • note taking • recording mechanisms Substance of the assessment • form • function
Grouping	Policies Procedures Timing Conditions of grouping • Static • Flexible • Student choice • Tasks • Pacing
Instruction	• Making connections, utility, relevance • Differentiated instructional • Enrichment/extensions • Supports/remediation • Language interactions
Content	• skills • meaning-making (form and function)
Environment	• Socio-emotional support/non-support (encouraging, reprimanding, empowering, fear-producing, etc.) • Intellectual (expectations, growing/stretching) • Interpersonal/social (turn and talks, sharing with each other, etc.) • Physical environment- literacy rich, word walls

For the codebook I created, I sought feedback from a peer reviewer on several occasions and left it open as it evolved based on the patterns that emerged from the data as I coded them. My *a priori* codes were created from Coburn and Turner's (2011)

framework which grounded my study. A sample of my a priori codes are found in Table 3.10 below.

Table 3.10: *A Priori Codes Based on the Conceptual Framework for My Project*

Component	Code	Description
Process of Data Use	***Noticing***	• Teachers' observations of the data they brought to the think-aloud meetings.
	Interpretation	• Teachers' meaning-making of their data during the think-aloud meetings, observations, and interviews.
	Constructing Implications	• Teachers' reaction to their data in terms of changes in practice to support students' instructional needs as noted in lesson plans.
Organizational and Political Context	***Data Routine***	• Structures for teachers to interact around a specific set of data.
	Access to Data	• Availability of assessment data for teachers to access for collection, storage, and retrieval.
	Leadership	• Leadership influences of allocating time, fostering norms of interaction, and participating in data-use routines.

Data-Displays. After developing *a priori* codes and emergent codes, I used Miles and Huberman's (1994) data-display element to continue my qualitative data analysis. A data display is described as being, "an organized, compressed assembly of information that permits conclusion drawing" (Miles & Huberman, 1994, p. 11). By using a data display, I was able to "extrapolate from the [response] data enough to begin to discern systematic patterns and interrelationships" (Miles, & Huberman, 1994, p. 11). First, I created "intra-case analysis" (See Table 3.11). The intra-case analysis allowed to me analyze patterns of responses for each of the TAPs, observations, and interviews (see Table 3.8) concerning the processes of data use as well organizational and political contexts within the school that influenced teachers' data use. The first step in an intra-

case analysis was to, examine all the relevant data sources to extract a description of what teachers said about their processes of data use and the political and organizational contexts in which they analyzed data (Berkowitz, 1997).

Table 3.11: Data Matrix for Intra-Case Analysis for TAP#1

Think Aloud #1 Responses						
Teacher	***Noticing***	***Interpretations***	***Constructing Implications***	***Data Routine***	***Access to Data***	***Leadership***
Anderson, Bentley	COW – from highest scoring to lowest	Preschool, "good parenting" "attention disorders"	Created instructional groups, beginning reader plan, Level-B books, poems	Weekly quick checks, "informal" running records	Yes - all literacy data held at teacher level	Only "allowed" to have 3 literacy groups
Burns, Christina	WRI - from highest scoring to lowest	Preschool, "contributing factors," highly motivated	Created instructional groups, beginning reader plan, Level-C and Level-B books, poems	Weekly quick checks, "informal" running records	Yes - all literacy data held at teacher level	Could only have 3 instructional groups
Lewis, Misty	COW - from highest scoring to lowest	Preschool, "very smart," "used strategies," "lack of 'good' parenting, not motivated	Created instructional groups beginning reader plan, Level-C and Level-B books, poems	Weekly quick checks, "informal" running records	Yes - all literacy data held at teacher level	Students "best fit" with 3 groups they were allowed to have
Nottoway, Jamie	COW - from highest scoring to lowest	"very bright," preschool, "hard worker," "access to books"	Created instructional groups beginning reader plan, Level-C and Level-B books, poems	Weekly quick checks, "informal" running records	Yes - all literacy data held at teacher level	"Outliers" had to "fit" within 3 groups
Vaughnway, Kerrighan	COW - from highest scoring to lowest	Preschool, "good parents," highly motivated, lack of motivation, "contributing	Created instructional groups beginning reader plan, Level-C and Level-B	Weekly quick checks, "informal" running records	Yes - all literacy data held at teacher level	Only "allowed" to have 3 literacy groups

		issues," "attention disorders"	books, poems	

Once I created an intra-case analysis for each of the TAPs, observations, and interviews, I then created a data display for "cross-case analysis." A cross-case analysis allows all the data from the each of the intra-case analysis to be combined to determine overlap in responses (see Table 3.12). This data analysis aided me not only to draw conclusions but also consider what the analyzed data meant and to assess their implications for the research questions.

Table 3.12: Data Matrix Example for Cross-Case Analysis

A Priori Code	**Interview Protocol**	**TAP #1**	**TAP #3**	**Observation**
Noticing	PALS COW and WRI	PALS COW and WRI	PALS	Observations of student's reading
Interpretations	Students applying strategies taught in literacy groups	"highly motivated," preschool, "contributing factors"	"very bright," "wants to please," "attention disorders," "EL, SPED, or SLI"	Interpretations not observed during classroom visits
Constructing Implications	Leveled reading groups based on student needs for literacy instruction	Instructional reading groups, beginning readers' plans, Level-B and Level-C books, poems for COW	Instructional reading groups, Level-C books, Level-D books, "on first-grade level"	Observations of leveled reading groups
Data Routines	Weekly – quick checks, four to six weeks – formal running records, 3 times a year, PALS	"informal" running records weekly, quick checks, formal running records, PALS	"informal" running records, PALS	"informal" running records or PALS testing
Access to Data	Locally with teachers	Locally with teachers	Locally with teachers	Locally with teachers

Leadership	As many leveled-reading groups as teachers can manage; use time such as RtI to support above-level readers; Title I to support identified students from PALS	Only allowed three instructional reading groups; not much "movement" between groups	Only allowed three instructional reading groups; not much "movement" between groups	Three instructional reading groups

Triangulation. In addition to the collection of data, I attempted to establish trustworthiness in my findings. By data *triangulation*, I employed and "built a coherent justification for the [patterns]" (Creswell, 2013, p. 201) that I discovered. At the same time, I wrote analytic memos and record any "negative or discrepant data" (Creswell, 2013, p. 202) for any inconsistencies I found in my data analysis. Finally, my follow-up interview allowed me to member check (Creswell, 2013).

Methodological Log. Throughout my study, I kept a methodological log where I captured my process of data collection and analysis. This log also served as my reflexive journal in which I described any issues that occur regarding data collection and analysis. In addition, I candidly shared my own feelings, reflections, and biases. This log complimented my analytic memoranda because it served as methodological, analytical (additional), and personal thoughts documentation (Rodgers & Cowles, 1993, p. 221-223). I provide some excerpts below from this approximately 12,000 word document. These specific excerpts reflect the struggle I had while analyzing the teachers' lesson plans during my Phase I of data analysis:

> Today, I spent time analyzing teachers' October lesson plans after TAP#1 where teachers analyzed their Fall PALS-K results and described the instructional changes they would make as a result of their data analyses. Below is my analysis of what teachers *said* they would be changing in their instructional groups in

> TAP#1, what was *recorded* on lesson plans in October 2014 as activities they would complete during instructional groups based on PALS-K data, and what was *observed* in October 2014 by the RT when visiting classrooms. I'm struggling right now because I'm concerned from the teachers' responses that there will not be a correlation among the three. I am concerned because these data are supposed to help me answer research question number 2 and I don't know if I will be able to report a finding that the teachers did change their instruction as a result of their data analysis. (Methodological Log, December 27, 2018)

In the following excerpt, I share an epiphany I had after analyzing those data:

> I need to remember, these data are not about me and what I am *hoping* to find. These data represent *real* teachers in *real* classrooms working with *real* students and under *real* pressures to teach their students to read. This is not about what I *yearn* to find but about what teachers actually *do* in their instructional reading groups as a result of their data analyses. It need to remember that my biases and preconceptions need to be discussed here so I will not cloud my judgement when reading these data. Remember what you do in classroom observations, Mel. You either see the attribute or you don't. You do not worry or hope that they will be there. Clear your mind and re-read, starting fresh and new, and create a matrix to help you see the patterns. (Methodological Log, December 28, 2018)

And finally, in my last excerpt (which I wrote after discussing with my committee chair), I describe my solution to this issue after I drafted Chapter 4:

> After discussing with [my committee chair], I realize that my findings were as I saw them – teachers did not use their constructed implications from TAP#1 to their lesson plans in October as this was never the expectation. In fact, [my committee chair] hoped that would not be the case and reminded me that once PALS is administered and analyzed, it becomes "dated" and "autopsy data" because the expectation is to move the students forward. I feel so much better because that idea can now be moved from "evidence" to "recommendations." (Methodological Log, February 23, 2019)

Running "To-Do" List. I kept a running "to-do list" in tandem with my methodological log and the writing of this capstone project. Through this "to-do list," my thoughts were completely transparent as to how I was collecting and analyzing the data for my project. As a task-oriented person by nature, this list will kept me on point with keeping up with any issue I grappled with and served as an official log of its resolution.

In the end, there were over 40 tasks with resolutions that I logged before sending my final copy of my capstone project to my committee members. For complete transparency purposes, I provided the first page of my "to-do" list as Appendix I.

"Thick, Rich Description." Finally, I attempted to utilize a "thick, rich description to convey [my] findings" (Creswell, 213, p. 202). In providing my audience (e.g. committee members as well as practitioners in my field) with thorough, detailed accounts, I believe I brought about an even greater sense of trustworthiness to my study.

Ethical Considerations

Because my capstone project was part of the larger research study, which had already received approval from the University of Virginia's Internal Review Board, I did not need to seek approval outside of what had already been received. The project team had already established a relationship with BRPES and its kindergarten teachers, therefore, I continued working with the negotiated and agreed upon terms of my presence of their site and adhered to the participants' willingness to participate in my project. Likewise, when I scheduled and conducted my follow-up interview with Ms. Woodard, I reminded her that her participation was entirely voluntary. During the interview, I asked and received permission to audio-record our conversation to not only document authenticity but also, to ensure accuracy in her comments for my findings.

I remained professional in all phases through collecting and analyzing data, and reporting of the findings. I protected all participants' identities by using pseudonyms as well as the research site and district with which it resided. Finally, I stored all of my data, analyses, and final paper on UVA Box and on a password-protected computer.

Chapter Summary

In the preceding chapter, I described my research design for this capstone project, including the setting, site, participants, data sources, and data analysis. The setting was in the greater Piedmont County Public Schools, and the particular site of my project was Blue Ridge Parkway Elementary School. My case was of five BRPES kindergarten teachers and their process of examining literacy data and the instructional decisions made from their analyses. The data sources for my project were: initial interviews, TAPs, classroom observations field notes, lesson plans, and a follow-up interview transcript. My analysis took place in two phases which involved emergent coding leading to patterns checked by follow-up interviews with the participants.

CHAPTER 4: FINDINGS

As discussed in Chapter 1, the Research Team (RT) from the University of Virginia's *Curry School of Education and Human Development* received funding from the Spencer Foundation to carry out a research study on kindergarten teachers' data-use practices in the area of literacy. The research project, *A School Year in Kindergarten Classrooms: Literacy and Data Use Practices*, allowed a team of researchers to investigate literacy instruction in public kindergarten classrooms over the course of three academic years 2014-2015; 2015-2016; and 2016-2017, respectively. Specifically, the research team studied teachers' practices in using data, including interim assessment data in kindergarten classrooms, to modify reading instruction. The researchers also investigated organizational influences on teachers' data-based decision making practices in these classrooms. This capstone project allowed me to examine the data from the 2014-2015 school year in Piedmont County Public Schools (VA), specifically studying the kindergarten teachers at Blue Ridge Parkway Elementary School as I responded to the following research questions:

In what ways did teachers alter classroom goals or objectives or modify student-grouping arrangements based on their assessment literacy data?

To what extent did the teachers in Piedmont County Public Schools use their literacy data (PALS-K as well as classroom assessment data) to adapt instruction in response to students' needs?

To what extent do the organizational and political context of the school influence the process of teachers using data?

In this chapter, I present the patterns that evolved in the data relevant to each research question. To answer the first research question, I present the patterns that emerged as a result of my analysis of the TAP#1 and TAP#3 interviews that were conducted for each kindergarten teacher. This section of my findings is entitled *Kindergarten Teachers' Data Literacy*.

Next, to answer the second research question, I present the patterns that emerged from analyzing the teachers' lesson plans and the RT's classroom observations as those plans were enacted. This section of my findings is entitled *Responsive Instruction*.

Finally, to answer the final research question, I present the patterns that emerged as a result of leadership interview transcripts of BRPES' principal (Ms. Kimberly Huffman) and PCPS Director of Elementary Education (Ms. Kellie Woodard). This section of my findings is entitled *Administrative Influences.*

I present all of my findings descriptively, interspersing relevant excerpts from the lesson plans, TAP interview transcripts, observational field notes, and leadership interview transcripts. Before presenting my findings, however, it is worthwhile to revisit some of the terms defined in Chapter 1. An understanding of these particular terms will simplify the reading of, as well as contextualize, the presented findings.

Data Use: an interpretative process in which data must be accessed/collected, organized, and analyzed, to be turned into information (Coburn, & Turner, 2011; Mandinach, Honey, Light, & Brunner, 2008; Marsh, 2012)

Interim – Benchmark Assessments: are defined as those that assess student knowledge and skills in a limited time frame and can be easily aggregated across school and classroom populations (Datnow & Hubbard, 2015; Perie, Marion, Gong, & Wurtzel, 2007).

Phonological Awareness Literacy Screening Kindergarten (PALS K): "a measure of children's knowledge of several important literacy fundamentals: phonological awareness, alphabet recognition, concept of word, knowledge of letter sounds and spelling" (Invernizzi, Juel, Swank, Meier, 2013, p. 1).

Pedagogical Data Literacy: "teachers' ability to understand and use data effectively to inform decisions" (Mandinach, 2012, p. 30)

Running Records: a literacy assessment where students individually read a passage and teachers capture their reading behaviors on a protocol.

Kindergarten Teachers' Data Literacy

As discussed in Chapter 1, the Kindergarten teachers at Blue Ridge Parkway Elementary School (BRPES) administered the interim assessment, *Phonological Awareness Literacy Screening Kindergarten* (PALS-K), three times a year: Fall, Mid-Year, and Spring. PALS-K is designed to measure a student's knowledge of several important literacy fundamentals such as: phonological awareness, alphabet recognition, concept of word, knowledge of letter sounds, and spelling (Invernizzi, Juel, Swank, Meier, 2013). In addition, teachers conducted "Quick Checks" weekly, usually on

Friday, for each individual student to determine how they were performing on the week's taught literacy skill. Finally, kindergarten teachers conducted Formal Running Records on every student every four to six weeks to chart students' progression in developing their literacy skills.

The kindergarten teachers administered their own PALS-K screenings, teacher-made "Quick Checks," and PALS-designed Formal Running Records, which allowed them real-time access anytime they needed to review the relevant data to make instructional decisions for each student. In terms of the PALS-K screenings and Formal Running Records, the teachers did not have to ask anyone else for these data, including their principal, as all of them had their own PALS-K accounts, user name, and login. For the teacher-made "Quick Checks," the kindergarten teachers did not use a universal "form" or "protocol" to record their data, rather, they made notes either in their lesson-plan book or their individual grade books. Table 4.1 (below) indicates which of the teachers used their lesson-plan book or individual gradebooks to record their "Quick Checks." Finally, there was a universal protocol for the Formal Running Records, which was provided to the teachers from the PALS website, which each Kindergarten teacher accessed through their account. I provide the Formal Running Record protocol in Appendix J. These were printed by the Kindergarten teachers' and stored in their personal student files for review.

***Table 4.1*:**"Quick Checks" Record Location

	Bentley, Anderson	Burns, Christina	Lewis, Misty	Nottoway, Jamie	Vaughnway, Kerrighan
"Quick Check" Record Location	Gradebook	Lesson-Plan book	Gradebook	Lesson-Plan Book	Lesson-Plan Book

Review of Coburn and Turner's (2011) Conceptual Framework

As stated in Chapter 1, I utilized Coburn and Turner's (2011) framework for teachers' data-analysis processes. There are three main stages of data-analysis and all of those stages are influenced by organizational and political contexts (Coburn & Turner, 2011). The first stage, according to Coburn and Turner (2011) is *noticing* assessment data. *Noticing* involves teachers identifying patterns or trends in their data in order to gain a deeper understanding of students' learning needs. Existing research suggests that teachers "routinely fail to attend to key pieces of information and major patterns in data" (Coburn & Turner, 2011, p. 177).

A key aspect of the process of data analysis is after a teacher notices assessment scores then they *interpret* or make meaning of them to provide information about the status quo of student learning (Coburn & Turner, 2011). *Interpreting* data allows teachers to identify the strengths and weaknesses of an entire class as well as individual students (Coburn & Turner, 2011). As they examine the data, part of interpreting the data includes the process of developing hypotheses about ways to improve instruction to help all students achieve (Coburn & Turner, 2011). New information is always understood though the lens of what we already know and believe to be true (Coburn & Turner, 2011). In addition, there are ample instances in the research on data use where teachers interpret test scores as confirming pre-existing beliefs and discounting the data that challenge their beliefs (Coburn & Turner, 2011; Young & Kim, 2010)

After *interpreting* scores, Coburn and Turner (2011), explain the next step in the process of data analysis is for teachers to begin *constructing implications.* This stage consists of teachers taking the information derived from noticing and interpreting and making instructional decisions for student learning. The step of *constructing implications* is the final step in Coburn and Turner's (2011) framework for data analysis and is the point where teachers take the information and apply it to classroom instruction.

My analysis of the TAP#1 and TAP#3 yielded three significant patterns with respect to the extent of the ways the Kindergarten teachers altered their classroom goals or objectives or modified student-grouping arrangements based on their assessment literacy data:

1. Using their PALS-K data, the kindergarten teachers noticed their data to "sort" their students into instructional reading groups and
2. After teachers "sorted" their students, they immediately constructed implications for each instructional reading group; and
3. After constructing implications for each instructional reading group, teachers then interpreted "why" students were possibly in each group.

Pattern 1: "Sorting" Students into Instructional Reading Groups

TAP#1 and Fall PALS-K Administration. The kindergarten teachers at BRPES described their reading program as a guided-reading approach, with students divided into leveled-reading groups based on assessment data which provide progress on their literacy-skill development. Students are then instructed in each of the leveled-reading groups with text they can read. In the TAP#1 interviews, all five Kindergarten teachers stated they first noticed how students performed on specific summary reports within the

Fall PALS-K data to sort their students into one of three instructional reading groups: top-instructional group, middle-instructional group, and low-instructional group. Some of the teachers used other names for the groups with their students, such as the "green" group or "Owls" group. Table 4.2 describes the names of the reading instructional groups for each of the kindergarten classrooms at BRPES.

***Table 4.2*:** Reading Group Names for Kindergarten Classrooms at BRPES

Teacher	Bentley, Anderson	Burns, Christina	Lewis, Misty	Nottoway, Jamie	Vaughnway, Kerrighan
Top-Instructional Group	"Bees"	"Pink"	"High Group"	"Green"	"Top" Group
Middle-Instructional Group	"Ladybugs"	"Blue"	"Middle Group"	"Blue"	"Middle" Group
Low-Instructional Group	"Owls"	"Purple"	"Low Group"	"Low"	"Low" Group

Noticing Data. All five kindergarten teachers disclosed in TAP#1 that the first thing they did after printing specific reports the Fall PALS-K screening data, was to *notice* how their students performed on specific attributes on the summed score of their chosen report. The teachers explained they printed their respective reports from highest performing to lowest performing, so they could notice how the students performed in descending order. The most important data from the PALS-K administrations for the kindergarten teachers seemed to be the results of students' COW, as four of the five teachers reported noticing these data first to give them an indication of where their students were in learning to read. In response to the RT question on TAP#1 of how teachers noticed their Fall PALS-K data, Ms. Nottoway replied,

> "The first thing I did when I pulled up my class [Fall PALS-K] data information was I sorted by the concept-of-word word list and I printed it. And so my data right now is broken down into the students who had the most words down to the students who had the least of the words. The word list is something we rely on to figure out if they are firm in the concept of word and that's what we are kind of using to base kids who are going on to books and then kids who are going to stick with concept of word poems. That's what I notice first." (TAP#1 Interview, October 20, 2014).

When Ms. Vaughnway was asked the same question by the RT, she replied,

> "I use this concept-of-word list to make my groups, my reading groups. I notice who is doing well, okay, and not getting it at all. That's how I make my groups." (TAP#1 Interview, October 20, 2014).

One teacher, Ms. Burns, deliberated on noticing the WRI report first, rather than COW, which she felt gave a better indication as to her students' progression in learning to read. When asked by the RT what she noticed first about her Fall PALS-K data, Ms. Burns replied,

> "If they're not seeing words in isolation, then they're probably not making the letter-sound connection yet. So to me, that's what I notice first because it is a better indication of whether or not the kids can read words." (TAP#1 Interview, October 20, 2014)

Regardless of what report was used, all five kindergarten teachers first *noticed* their literacy-assessment data and then moved to sorting students into their instructional reading groups. None of the five teachers stated there were pre-established criteria for placing students into three instructional reading groups. Yet, in reviewing their responses to the TAP#1 interviews, it was clear that four of the five kindergarten teachers used similar criteria to sort their students, which was first from their COW report. One teacher, however, used the WRI report to sort her students. According to four kindergarten teachers, as well as the building principal in her initial interview, the COW Class Summary report their "first report" for determining instructional reading groups for

students. From the TAP#1 transcripts, students who scored in the 7-10 (firm) range were placed in the top-instructional group. Students who scored in the 4-7 (rudimentary) range were placed in the middle-instructional group and students who scored less than 4 (developing) were placed in the low-instructional group. When asked by the RT the criteria for establishing instructional reading groups, Ms. Huffman, the building principal, replied,

> "The first thing I was looking for was – the beginning of the year testing, honestly, was the students that have tested firm for concept of word. I went through each teacher's class summary sheets which is what [Director of Elementary Education] has us do. This is how they will divide their kids into firm, rudimentary, and developing groups for instruction and then fill in some holes with looking at other reports such as letter sound and rec." (TAP#1 Interview, October 20, 2014)

Ms. Vaughnway further elaborated on her instructional reading group selections by stating,

> "So I told you I use this concept-of-word list to make my groups, my reading groups. I only have three, so was using this to divide my kids up into three groups. So my top group will be 7-10, middle group 4-6, and low group will be less than 3. We also call them firm, rudimentary, and developing but I call them top, middle, and low. It doesn't matter what we call them as long as we use those numbers." (TAP#1 Interview, October 20, 2014).

Similarly, Ms. Bentley described in TAP#1 how she divided students into instructional reading groups by elaborating,

> "First, what I did was I took my whole class list and I sorted them by COW. If students scored four or below, they were middle. Students who scored 7ish to 10ish were top, and students with less than 3 were low. I actually have nine that tested, well eight that tested firm and one that's kind of teetering on the edge. My highest one got a nine out of a 10 COW list." (TAP#1 Interview, October 20, 2014)

One kindergarten teacher, however, used the WRI to establish her instructional reading groups, which was different than the other four teachers in her grade level. When the RT asked her in TAP#1 how she will divide her students into instructional reading groups, Ms. Burns replied,

> "MY PALS data here shows that nine of my students tested firm according to the isolation lists. So they are in my top group which I call 'Pink.' Then three of my students would be considered in the rudimentary group because they have between four to six in isolation. And then five of my students would still be developing, or six actually, because they did not reach the benchmark of seven, and they're four or less in their isolation lists. My low group here still struggles with some letter and sound knowledge so that doesn't surprise me." (TAP#1 Interview, October 17, 2014).

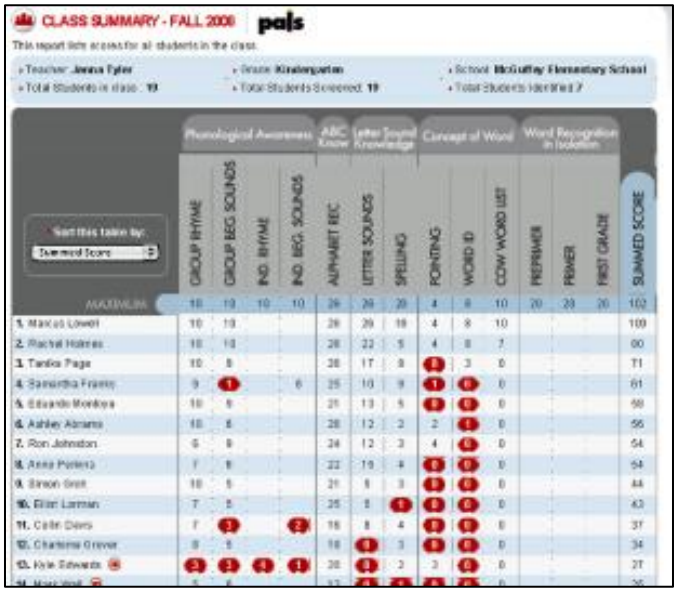
I realized after reviewing the Fall PALS-K benchmarks (See Chapter 3) that Ms. Burns erroneously applied the benchmarks for the COW component of the assessment to the WRI component. There is not a benchmark for the WRI in kindergarten and was confused as to why she would use that as a measure to assign students a reading group. After reading more of her interview transcript, Ms. Burns elaborated on why she used the WRI to assign her students to their respective instructional reading groups.

> "So as I said earlier, if they're can't see words in isolation, then they're probably not making the letter-sound connection yet. So my low students are getting zero, one, two, three. They need a lot more help with letter sounds in order to be able to do that skill. My middle group needs help with letters and sounds and needs a little help to get there. My high group is consistent. It seems that they need more of a push to start that decoding because they've mastered the word list by testing firm. They are making connections." (TAP#1 Interview, October 17, 2014).

Therefore, Ms. Burns did not follow the same criteria as her colleagues for determining her instructional reading groups and used the benchmarks for the COW portion of the PALS-K assessment to determine how her students were performing on the WRI component, which is a misconception that will be explored later in recommendations in Chapter 5.

Red-Highlighted Areas on PALS-K Reports. In addition, all five of the Kindergarten teachers focused their conversations in TAP#1 on the scores they noticed the most – students with scores highlighted in red on the PALS-K reports – indicating the student was below the Individual Task Benchmark for the task (Using PALS-K Data to Drive Instruction, para. 17, n.d.). Reports, such as the Student Summary, provide information about the students' strengths and weaknesses as well as identify key areas where students require more support to develop their fundamental literacy skills. Figure 4.1 provides an example of a Class Concept of Word Report with red-highlighted areas.

Figure 4.1: Example of a PALS-K Class Summary Report with Red-Highlighted Areas



During the TAP#1 conversations, all teachers spent considerable amounts of the interview discussing what they noticed about the red-highlighted scores. Examples of teachers' conversations focusing on the red-highlighted areas are below. First from Ms. Bentley,

> "With instruction for developing or my Owls, I have come up with a kind of put our poem into the book format so I'm gonna cut it and take like a book so that kind of threw them off in their testing was the poem silent sheet form so they

couldn't go back and say there was a little turtle, they couldn't' re-read the sentence to get where they were. The flipping of the pages and not being able to see the last line kind of threw them off so kind of getting them used to the book format but with the same poem. When you see these red, these are just, I know when I see these red, things on this PALS assessment sheet here that does help me know that yes, these are the kids I need to focus on because they did not meet the benchmark. So kind of coming up with the activities that can help them in the areas that are marked red, king of coming up with activities for those specific students to help them progress a little bit more and get them with their other peers" (TAP#1 Interview, October 17, 2014)

And Ms. Lewis:

"My lowest group, still working with concept of word. The tracking – they're pretty solid with that. Words in context they know how to figure out the word if they don't know it automatically. They're great at going back and tracking and figuring it out that way. We have to work with more individual words in that group and focus more on what's the letter I see. What sound does it make? Focusing on the sound connection instead of tracking all the time to get to it. For some of them that's a handicap. That's why it is red here on this list. It's a quick easy way for me to figure it out with the least amount of effort that I have to use to figure it out sometimes." (TAP#1 Interview, October 17, 2014)

Finally, Ms. Burns:

"So my low group needs still consist of letter recognition sounds, in text isolation, rhyme because you see it in red here. They all don't consistently have it so we'll still keep working on that. Writing, being able to write the letters that they're telling me, and we're working on beginning and ending sounds." (TAP#1 Interview, October 17, 2014)

TAP#3 and Spring PALS-K Administration. For TAP#3, the Kindergarten teachers brought PALS data to the meeting and one teacher also brought her informal running records collection that was in her lesson plan book. TAP#3 took place in May, and during the interviews, teachers described what they noticed about their Spring PALS-K assessment data and how students were sorted into instructional reading groups for the end of Kindergarten. Although the teachers used a different PALS-K report in the Fall to create their instructional reading groups, they applied the results of the Spring Student

Summary summed scores (see Chapter 3) to how they sorted students for the remainder of the school year. For example, during Ms. Lewis' interview, she began the conversation by describing her students' progress on the Spring PALS-K Class Summary Report and compared those results their literacy group placement. Specifically, Ms. Burns stated:

> "Well basically I just finished my PALS testing and I have the most up-to-date information on the summary report. That is what I look through to know who is met the benchmark and who hasn't. This year my kids were placed in the right groups because the top group is all above grade level, the middle group is right where they are supposed to be at 83, and the low group is well there's something there that I can't pinpoint and I feel like in the future is going to be some kind of concern where we can put our finger on it more but they are below level between 45 and 75, and have been all year." (TAP#3 Interview, May 6, 2015).

In addition, Ms. Vaughnway had a similar reaction in her TAP#3 by describing her PALS-K Spring data as:

> "This is the information we needed to put our children in groups. We use these reports sorted from highest to lowest to make our groups. It really helps us form our groups and kind of helps us see the progress that the kids are making where we can use that and have something definitive. It's like this information shows what they have been doing in small group. These reports show us you know that the top group is going to be above the 83, the middle group close to the 83 or at it, and the low group will always be below 83 because that's where they score in the low group." (TAP#3, May 6, 2015)

Sharing with First Grade Teachers. For the remainder of the TAP#3 interviews, the Kindergarten teachers focused their discussion on what they would share with the first-grade teachers about what they noticed about their students' reading progress. Unlike in TAP#1, the teachers did not focus on the red-highlighted areas on their PALS-K reports, but focused their discussions on specific skills they noticed students would need to be successful for reading in the first grade. All of the

kindergarten teachers shared that they would use their Spring PALS-K results to formulate instructional reading groups for their students in the Fall of first grade and in most cases, would not be much different than the group configurations in Kindergarten, especially for the low-instructional group. For example, Ms. Bentley described specific scores she noticed in her Spring PALS-K that she would share with the first grade teachers,

> "Students in the lower group [are] really just trying to stretch out those CVC words, kind of thing. See right here with those scores. These kids are probably going to stay in this group in the beginning of first grade. You can tell that from their scores here that they need help with that on PALS. They can sometimes recognize the silent E in these words here but they don't understand some of the other strategies that we're teaching. So definitely I would tell first grade groups for this low group to make sure they understand that they hear the /l/ at the end of 'little' but they don't hear the /e/." (TAP#3 Interview, May 6, 2015)

Similarly, Ms. Burns made similar remarks to Ms. Bentley regarding her students in the low-instructional group as what she noticed about her Spring PALS-K data:

> "Well we were to pick three different students. For the low student I picked my purple [low-instructional group] group of students because they will be there next Fall. See they didn't meet the K 83 so they will be low again next Fall. They tested for concept of word mid-year PALS and they are currently working at Level-D as you see here. I would tell the first grade teacher that in word study they are working in mixed diagraphs and will need more help with that to get it because I noticed they didn't get that here. That's what I would say about that group and what I noticed about their data." (TAP#3, May 6, 2015)

Summary of Pattern 1: "Sorting" Students into Instructional Reading Groups. The kindergarten teachers at BRPES described their reading program as a guided-reading approach, with students divided into leveled-reading groups based on assessment data which provide progress on their literacy-skill development. Using their PALS-K data, the kindergarten teachers noticed their data to "sort" their students into instructional reading groups. In the Fall, most teachers used their Fall PALS-K COW

report to divide their students into three instructional reading groups, although one teacher used the WRI report. Teachers noticed their red-highlighted areas on their reports and discussed them during the TAP#1 interview. In the Spring, teachers used their Spring PALS-K class summary reports, not the concept of word reports, to place their students in instructional reading groups. In addition, they described what they noticed about their Spring PALS-K data and articulated what they would share with their first grade colleagues.

Pattern 2: After Teachers "Sorted" Their Students, They Immediately Constructed Implications for Each Instructional Reading Group

After teachers *noticed* their data and sorted students into instructional reading groups, all five teachers moved to constructing implications for each respective group. I found this to be highly interesting as this did not follow the pattern Coburn and Turner (2011) described in their conceptual framework for teachers' data-use processes. However, I continued with this pattern in my capstone project.

TAP#1 and Fall PALS-K Data. After the Kindergarten teachers sorted students into groups from their Fall PALS-K data, then they planned the instructional changes they believed would raise student achievement in literacy. Whether or not the constructed implications were *appropriate* interventions, I described this pattern as to what the kindergarten teachers said they would do for their instructional groups.

Top Instructional Group. All five teachers stated that their top-instructional group would immediately go into a beginning reader plan. Four of the five teachers identified a beginning reader plan as Level-C books, whereas one teacher identified it with Level-B books. Ms. Lewis described her plans for her top-instructional group as:

> "My higher group, they are all, and I haven't seen this in a number of years, [but] this group seems to be a little more even as far as what I see carry over from the COW to their writing. I'm going to be pulling [L]evel-C books for them because technically, they are freshly firm and that's about where they are going to lie. Work with those [books] for a bit, do some informal running record to make sure that's a good level for them to be, and using the PALS electronic records plan for the beginner reader group is where I'll go, but starting at a [L]evel-C book and seeing where their confidence is, where their strengths are, and kind of taking it from there." (TAP#1 Interview, October 17, 2014)

In addition, Ms. Burns described her plans for her top-instructional group as:

> "So, my new groupings will work out well and we'll test them out next week. My high group will all be moving into a [L]evel-B book just to get them used to the book process, and then after that moving into a [L]evel-C book. Decoding skills, you know, how to use a book, and more decoding strategies." (TAP#1 Interview, October 17, 2014)

Similarly, Ms. Vaughnway shared her instructional plans for the top group as,

> "They'll be doing activities with the book, instead of working with the poem. So, to begin since this is really early in the year for us to have groups set up that are in the beginner reader plan, I kind of need to teach them some of those decoding strategies to help them figure out those unknown words. They need to know, first of all, the book to be able to use the picture clue to figure out words, to look at the beginning letter and the ending letter, to make sure that word makes sense, to learn how to sound out the word and to just stretch it, to blend it to form the word. So they've got to learn those skills to be able to keep progressing. That's what I am doing with that group." (TAP#1, October 20, 2014)

Middle Instructional Group. For the middle-instructional group, which was students who scored less than six on the COW report or WRI report, all five Kindergarten teachers reported that those students still needed support with alphabet recognition and letter sound knowledge. In addition, the teachers expressed that students in this reading group would have a beginner reading plan. Four of the teachers stated that the beginner reading plan would consist of Level-B books and one did not indicate the level in her interview. Ms. Nottoway described her beginner reading plan for her middle-instructional group below:

> "In my blue group, I will probably put them in a [Level]-B book for a week or so to see if we can pick up on some sight words and kind of get in the idea of reading in a book." (TAP#1 Interview, October 20, 2014)

Whereas, Ms. Burns explained her beginner reading plan for her middle-instructional group as:

> "My middle group will now be [Student A,], [Student B], [Student C], and we'll really be pushing words in isolation with them. A few of them can still work on rhyme, but most of them in isolation. We will doing a beginner reader plan and I'll do a running record with one or two students every day in my group to see if they are good." (TAP#1 Interview, October 17, 2014)

Low Instructional Group. Students who scored less than four on either the COW report or WRI report, were sorted into the low-instructional group after the Fall PALS-K administration. All five Kindergarten teachers explained their low-instructional group would use poems to develop their COW and continue receiving intense instruction on alphabet recognition and letter-sound knowledge based on the information on those specific PALS reports. Ms. Bentley narrated her literacy plans for her low-instructional group as being:

> "For my low group, it's developing so they're gonna be still in concept of word as well and we're gonna kind of move into syllables because they're still pretty well with their beginning sounds and their letter rec[ognition] as well as group rhyme. I'm also gonna be doing with them their ABC order out of order, putting them in order kind of thing because as you can see on their scores here, the lowest letter rec[ognition] was, I believe it was 20, my lowest one I had on my letter rec[ognition] so I really feel confident that as we're going with the beginning sounds, they're gonna get those so really kind of focusing on the syllables this time and putting them that kind of thing and they'll also be into beginning sounds for word study, focusing on that. The best way to reach these students is through poems." (TAP#1 Interview, October 17, 2014)

In addition, Ms. Vaughnway described her literacy plans for the low-instructional group as being:

> "We start out with the alphabet and check them off. A lot of times I might call out a letter and they give me the sounds. Or, I'll call out a sound and they have to find the letter. Or, I have pictures, and I might lay a picture down and they will start writing the beginning sound, even if we hear the ending sound. Also, with word study, [we] will be doing the beginning sounds group. They can often find the words in the poem, especially when we do 'I'm thinking of a word that begins with…" so we'll keep working in poems to do those skills." (TAP#1, October 17, 2014)

TAP#3 and Spring PALS-K Data. In TAP#3 that occurred in May 2015, all five Kindergarten teachers, much like in TAP#1, described how they used the Spring PALS-K data to determine the instructional plans for each literacy reading group. All of the teachers described in detail their instructional plans for each of the reading groups, however, not all of them shared the specific data they used to construct those implications. In terms of detailed instructional plans for their students, the teachers described the book levels they would be reading, word-study features each group would need to advance their spelling skills, and finally, writing strategies necessary to develop sentence and paragraph skills. The teachers all stated they used the Class Summary report from their Spring PALS-K testing administration to make decisions about their groupings, but did not disclose how they used particular pieces of data from those reports to make instructional decisions.

Top Instructional Group. For the top-instructional group, all five teachers reported the students' instructional book level, but they were not all the same. One teacher did not discuss the reading level of her students, two teachers stated Level-F books was where their students were currently reading, and two teachers explained Level-G books was the current level of her students. In constructing implications for her top-instructional group, Ms. Bentley shared with the RT,

> "My 'Bees' are in their third week of Level G. They are my higher ones. They have been on target all year. We're going to keep working on that." (TAP#3 Interview, May 6, 2015)

Similarly, Ms. Lewis described the instructional plans for her top-instructional group:

> "My high group they've been on an E for probably three or four weeks. I'll probably hold them there for at least the majority of the rest of the year. I'm not one to try to push them to[o] fast. I want them to be solid where they are before they move on. And when you have a whole group of them it's easier, I think that way too, to make sure that they're all really strong at their level before they are moved on. I got PALS data to show that. So that's where they are and what we're doing." (TAP#3 Interview, May 6, 2015)

Middle Instructional Group. In terms of the middle-instructional group, during the TAP#3 interview, all five teachers described their plans for these groups but once again did not disclose the data they used from the Spring PALS-K nor did they define how they made their instructional decisions. Rather, all five teachers described what their students were practicing in those groups without pointing out specific data to justify their decisions. One teacher listed their middle-instructional group as being in Level-D books, two teachers explained their students were in Level-E books, one teacher stated Level-F books, and one teacher did not disclose the book level at all. When asked about her middle-instructional group and their current reading level, Ms. Nottoway stated:

> "My Blue group is currently on a [L]evel-E book because [Level] D at the end of the year would be where we look for them to get. They are reading okay at a {L]evel-D. We've learned about strategies but they still aren't practicing on their own. We're using them. That's what we're still doing right now." (TAP#3 Interview, May 6, 2015)

Similarly, Ms. Vaughnway described the current reading levels of her middle-instructional group in TAP#3 as being:

> "Well my middle group in their PALS and then I just finished, too, the running record and they tested on instructional [L]evel-D. So that's where they'll go. And a lot of them too, like writing samples and things, when – they have a writing

> notebook. And when you look at the things that I assigned them from the beginning of the vear and how they've progressed, and especially the change from January to now, is just massive. So we will keep doing what we're doing until the end of the year." (TAP#3 Interview, May 6, 2015)

Low Instructional Group. For the low-instructional group, the Kindergarten teachers not only described their instructional plans for their students in TAP#3 but also, there was a discrepancy in which reading level were the expectations for the students to attain before they entered first grade. For the instructional reading level, one teacher stated her students were in Level-B books, one teacher provided Level-C books for the current reading level, one teacher described her students as being on a Level-C/D, and finally, two teachers explained Level-D books were where their students were as of the TAP#3 interview. For example, Ms. Bentley described her low-instructional group as:

> "Right, like with the rhyming stuff, beginning sounds, syllables kind of stuff, just kind of those things and manipulation is kind of more moving into first grade so we used PALS to see where they are. They are at [Level]-C books. Definitely PALS, obviously, because they have concept of word, and how to track, and know that letters come together to make words. So those are the things we're firming up right now until the end of the year." (TAP#3 Interview, May 6, 2015)

Comparably, Ms. Burns shared her plans for the low-instructional group as:

> "So this [Purple] group tested for concept of word mid-year PALS and when we also did the running record they tested into a Level-B [book]. They are currently working in a Level-D [book], which is our end of year goal, but I'm not sure if they'll test independently at a [Level]-D. [We] are working with mixed diagraphs and [they] are able to write multiple complete sentences independently. So, to, me it seems like [they] have mastered the skills we would expect as far as literacy goes." (TAP#3 Interview, May 6, 2015)

When explaining their students' reading levels in the low-instructional group, the Kindergarten teachers did not all use the same book-level as the expectation for their students to master before entering first grade. Four of the five Kindergarten teachers stated that for a student to be prepared to enter first grade in the Fall, they had to have

mastered Level-D books and that reading level was the expectation of end-of-year Kindergarten students. However, one teacher stated that students reading at a Level-D was below the standard to enter first grade. Therefore, the teachers were not using the same data to determine whether or not students were prepared to enter the first grade the following school year. In fact, Ms. Vaughnway stated in her TAP#3 interview when talking about a particular student that,

> "She's made a lot of progress if we look at her pouch from where she started to where she is now, it has shown improvement. And when I did her running record, she tested on a [L]evel- D to go to first grade, so she will go in below grade level." (TAP#3 Interview, May 6, 2015)

Whereas, unlike Ms. Vaughnway, the other Kindergarten teachers stated that students reading at a Level-D were meeting the end-of-year expectation for the grade level. Ms. Lewis, for example, stated,

> "The ones I would say are [in the low-instructional group] and more than likely – we want them reading Level-D by the end of the year. [Student A] is gonna be right there at the cusp of a D. I'm not quite sure that after I have done my running records it will match up with PALS that she will be independently at a [L]evel-D, but [Student A] is not too far from it." (TAP#3 Interview, May 6, 2015)

Summary of Pattern 2: After teachers "sorted" their students, they immediately constructed implications for each instructional reading group. Although Coburn and Turner's (2011) conceptual framework for teachers' data-use processes indicates that the next step in data analysis after *noticing* is *interpreting* data to understand why students may have performed the way they did, the kindergarten teachers in my study moved from *noticing* their literacy assessment data to *constructing implications* for their instructional reading groups. After sorting their students into instructional reading groups from the Fall and Spring PALS-K assessment windows, all

of the teachers in my study began describing the instructional activities they would provide each respective group. In the Fall, teachers planned for the students in the top and middle instructional groups to move into beginning reader plans and involve them in reading books, at either Level-B or Level-C. The low instructional groups would stay in poems in order to firm up their COW skills. In the Spring, teachers planned for their students to continue in the leveled books they were already reading or pushing their students to higher levels before the end of the year.

It is important to note that whether or not the constructed implications were *appropriate* interventions, I described this pattern as to what the kindergarten teachers said they would do for their instructional groups. For example, in the aforementioned discussion, there were instances in which the teacher held the entire group in the same book level when other students had already mastered the assigned book level or continued instruction with letter sounds although the students were already able to recognize letter sounds. In addition, there seemed to be some confusion among the teachers as to which book level kindergarten students should have mastered prior to enrolling in first grade. For example, some teachers thought the requirement was for a student to be reading books at Level-C, while others felt students should be ready to begin Level-D books. Those inconsistencies will be explored through recommendations in Chapter 5.

Pattern 3: After Constructing Implications for Each Instructional Reading Group, Teachers Then Interpreted "Why" Students Were Possibly in Each Group

After teachers *noticed* their data and *constructed implications* for each respective instructional reading group, they moved into *interpreting* why students were possibly in

each group. I found this to be highly interesting, because once again, this did not follow the pattern Coburn and Turner (2011) described in their conceptual framework for teachers' data-use processes. However, I continued with this pattern as this is the way the data presented in my capstone project.

TAP#1 = "Factors Within or Beyond Their Control." The TAP interviews provided many examples of how the teachers' individual beliefs, knowledge, and motivation influenced the way they *interpreted* student scores whether it was the PALS-K results or their own collected data. Sometimes the conversations consisted of factors that were within the teachers' control such as decoding practice or word-recognition skills provided by the teacher, as possible explanations for specific scores. For example, Ms. Nottoway described factors such as "appl[ication] of strategies that are learned in class help them make progress on PALS" (TAP#1 Interview, October 20,2014). In other times, the conversations consisted of factors that were *not* within the teachers' control, such as preschool experience, parenting styles, or student motivation to describe the scores as feasible. For example, Ms. Vaughnway suggested "students who went to preschool are more motivated and have more parental support than the others to do well" (TAP#1 Interview, October 20, 2014). Regardless of whether the factors were or were not within the teachers' control, all five Kindergarten teachers used what they already knew and believed, rather than the actual assessment data, as interpretations for specific students' scores on the PALS-K assessment and as possible explanations for why they were in a particular instructional reading group. As I created the pattern, it appeared that the teachers used factors *within* their control to describe why the students possibly were in the middle instructional reading group, and factors *beyond* their control as to why

students were in the top or low instructional reading groups. I provide the rationale for my thinking in the paragraphs below.

Top Instructional Group. For example, all five Kindergarten teachers stated in TAP#1 that the students in their top-instructional groups had high scores because they had all been to preschool, had high motivation, and had good parental support. None of the Kindergarten teachers stated that their reading instruction was the reason the students were performing well in the top-instructional group. Rather, as Ms. Lewis stated,

> "My top group, they've been firm for quite some time. I just didn't have the [F]all PALS data to prove it on paper. But in my mind from what I saw in them from where they were. So they've kind of been firm for a while. They're faster paced and more self-motivated as well, and interested in reading. They've had preschool." (TAP#1 Interview, October 17, 2014)

Or as Ms. Burns stated,

> "I noticed that the students that came in with high-letter sound knowledge tend to be my students who are excelling. The students who came from a strong preschool or good parental background tend to be more successful. The ones that have parents who are involved, and that's typical I know, tend to do really well. I can definitely tell like the majority of the ones that are in my high group have received, and I know for sure that they've gone to pre-K like quite a few of them, for instance this one here and this one were pre-K here which they also do PALS I guess towards, they've already started doing them here as well as the other ones, you can kind of tell that the ones that have received pre-K and got that background knowledge of letter sounds in the preschools that are going over that kind of stuff, really are helping them out in K. Their parents are very supportive." (TAP#1 Interview, October 17, 2014)

Low Instructional Group. On the other end of the continuum, however, all of the Kindergarten teachers interpreted that the students in their low-instructional group had other "interfering" factors such as speech, language, motivation issues, attention disorders, poor self-confidence, special education services, or lack of "good" parenting to support their reading instruction. In addition, none of the teachers stated that their reading instruction was supporting their low-instructional group. Rather, other factors

contributed, such as those aforementioned, to the students' lack of progress in the low-instructional group. For example, Ms. Vaughnway shared with the RT that,

> "I think this for [Student A] will help improve his self-confidence because is a little fellow that very much just wants to please. He craves attention and lacks it at home. And it is a question of [Student B]'s capability. It's that she is just five and very young! It's a question of her actually putting forth the effort to do this and having the maturity to do so. She is highly unmotivated and I don't know if we can turn that around until she's older." (TAP#1, October 20, 2014)

In parallel, Ms. Burns stated that,

> "Attention is a huge issue for [Student A]. [Student A] cannot attend for more than a few seconds at a time before he's turned around trying to see what somebody else is doing, or letting me know what that person did instead of what he needed to be doing. So I think until we can get his attention disorders under control, it is going to be hard for him to learn to read and find out what his true potential might be." (TAP#1, October 17, 2014)

Ms. Lewis shared how her low-instructional group had "contributing factors" to not being able to grasp reading skills such as,

> "[Student A]'s one that can't quite grasp yet, reading. Some of it is a language issue. I can tell sometimes when we're talking about things and looking at pictures of things, he's not always exactly sure what to call it. I think also because he had so much assistance last year in kindergarten and had an aide with him basically all the time, sometimes [Student A] likes to sit back and see what his aide will do for him versus having to do it himself. But we've been pretty good letting [Student A] know he's responsible for it and the aide is just there to keep you on task." (TAP#1 Interview, October 17, 2014)

Middle Instructional Group. While the teachers primarily used "factors outside of their control" to describe why students in their top- and low-instructional groups were possibly there, they used factors that were *within* their control to describe why students were in the middle instructional group. For example, Ms. Burns described why the students were in her middle instructional group as,

> "I am so proud of my middle students. They are applying their decoding strategies that I taught them. That's why they are in the middle group because

> they can apply strategies that I teach them during group. Look at this one here, she is mastering this skill and so is he, and him, and her, too." (TAP#1 Interview, October 17, 2014)

Similarly, Ms. Vaughnway stated why her students were in her middle instructional group as,

> "I have taught them some of those decoding strategies to help them figure out the unknown words and look, they are doing it. They used their picture clues to figure out words, and looked at the beginning and ending letters to make sure the words make sense. They also sounded out the words and stretched them to blend them to form words. They're using some of the skills I've taught them and they are progressing." (TAP#1 Interview, October 20, 2014)

TAP#2 = "Factors Within or Beyond Their Control." As in TAP#1, during the TAP#3 interviews, teachers interpreted the literacy scores of individual children, based on their own contexts and beliefs, citing reasons as to why the students performed in a particular way. Similarly to TAP#1, the kindergarten teachers reported that students in the top and low instructional groups were there because their PALS-K scores were beyond teachers' control, and, students in the middle instructional group received scores that were within their control.

Top Instructional Group. For TAP#3, four of the five Kindergarten teachers stated that the students in their top-instructional group were "very bright," "sweet children," "wanted to please," "did their homework," and had "good parents involved," which contributed to their overall reading success. For example, Ms. Bentley noted,

> "Yeah, because [Student A] is very bright, she's very capable of doing higher level thinking kind of stuff so don't put a limit on what she's capable of." (TAP#3 Interview, May 6, 2015)

Or as Ms. Vaughnway described,

> "Okay, my first child is [Student A] and he is an above-level child. He's been in my top group probably since the beginning of school and he has maintained in that group. He's just a very sweet child, he wants to please, works hard at all that

> he does, and always does his homework. That's what I would tell first grade." (TAP#3 Interview, May 6, 2015)

Low Instructional Group. Moreover, all five of the Kindergarten teachers stated in their TAP#3 interview that the students in their low-instructional group struggled since the first day of school, did not have "involved" parents, did not do homework, were very "young" kindergartners, lacked exposure to reading at home, and needed more time to do work. One of the teachers discussed how "other factors" interfered with her low-instructional group's progress and considered slow processing, language, special education services, and blank stares as reasons for her students did not have success in learning to read. Ms. Bentley noted one of her students in her low-instructional group as,

> "He kind of just stares – long blank stares. It is just taking him more time to process it and get to the reading. He is a 'young 5,' and I think the age and him just needing time to process. Things I can't help." (TAP#3 Interview, May 6, 2015)

Or as Ms. Lewis described,

> "And at this age, it is not their fault, it's just that I never get homework returned for her. I get the feeling from that she probably doesn't have parents that give her extra practice or reinforcement with skills at home. She has an IEP type of thing and that is what is keeping her from reading." (TAP#3 Interview, May 6, 2015)

Similarly, Ms. Nottoway illustrated,

> "He hasn't for the most part, made any progress, because he is out of the room during reading instruction. I should have addressed this a little bit earlier in the year – if he had of gone with [another teacher] at a different time I feel like he would have a progressed a little farther than he did. But, he had to go to that teacher for language services and I just couldn't help him because of that." (TAP#3 Interview, May 6, 2015)

Middle Instructional Group. Likewise to the TAP#1 interview where teachers believed factors within their control were the main reasons for the success of the group,

the kindergarten teachers interpreted similar reasons in TAP#3 for their middle instructional group's achievement. For example, Ms. Nottoway shared,

> "I guess you would say my middle group is where they are because they are who we've talked about the strategies, we've learned the strategies, and practicing the strategies on her own. And we're working on this in group and here in independent reading and they are students that – it's that we're teaching and they're applying strategies. They are using them. They have figured out what strategies to use when coming to words they don't know." (TAP#3 Interview, May 6, 2015)

In addition, Ms. Burns stated,

> "My middle group is using their blends, /s/, /k/, and /sk/, together and are able to use those skills to decode. I can see it everywhere, in their writing, in their spelling, in their decoding, in everything. This group uses what we teach them and the progress they have made since the beginning of the year is just massive because they are willing to use what we teach them. They have mastered what I expected and then some because they apply." (TAP#3 Interview, May 6, 2015)

Summary of Pattern 3: After constructing implications for each instructional reading group, teachers then interpreted "why" students were possibly in each group. Although Coburn and Turner's (2011) conceptual framework for teachers' data-use processes indicates that the next step in data analysis after *noticing* is *interpreting* data to understand why students may have performed the way they did, the kindergarten teachers in my study moved from *noticing* their literacy data to *constructing implications* and finally, to *interpreting* why students were possibly in each instructional reading group. In both TAP#1 and TAP#3, teachers interpreted students' literacy scores – thus their placement in specific instructional reading groups – as either due to factors *within* or *beyond* their control. The kindergarten teachers described students in the top instructional group as having more preschool experience, "good parenting" backgrounds, very bright, highly motivated, wanting to please as reasons beyond their control as to why

they scored so well on their Fall and Spring PALS-K assessments. For students in the low instructional group, the teachers described students as being too young, needing SPED or language services, lacking homework completion, and exhibiting attention issues as to factors beyond their control for their Fall and Spring PALS-K performance. However, the kindergarten teachers described students in the middle instructional group as able to apply taught literacy strategies to their PALS-K assessments, or factors within their control, which explained why they were successful in the middle instructional group.

It is important to note that whether or not the interpretations of students' literacy data are within or beyond the control of the kindergarten teachers are valid and accurate, I created this pattern as to what the kindergarten teachers said in their interviews. Those interpretations will be explored through recommendations in Chapter 5.

Responsive Instruction

In the foregoing section, *Kindergarten Teachers' Data Literacy,* I answered my first research question: *In what ways did teachers alter classroom goals or objectives or modify student-grouping arrangements based on their assessment literacy data?* Three specific patterns regarding Kindergarten teachers' data literacy emerged: teachers noticed their Fall PALS-K and Spring PALS-K data primarily as a way to sort students into instructional reading groups, teachers then created constructing implications for their students literacy instruction based on those data and then interpreted why students performed the way they did either due to factors within or beyond their control. This section serves to answer my second research question: *To what extent did the teachers in*

Piedmont County Public Schools use their literacy data (PALS-K as well as classroom assessment data) to adapt instruction in response to students' needs?

Mandinach's (2012) definition of *pedagogical data literacy*, implies that once teachers turn their assessment data into actionable information about their students' learning, they will in turn plan future instruction based on identified strengths and weaknesses. Therefore, by analyzing teachers' lesson plans after the TAP#1 interviews, an observer could determine whether or not teachers used their data to inform the next steps in instruction including the goals, objectives, activities, and materials.

As discussed in the *Kindergarten Teachers' Data Literacy* section, the teachers administered the interim literacy assessment three times a year in order to receive diagnostic information about their students' skill progression in learning how to read. Once the Kindergarten teachers placed the students into three instructional reading groups that were deemed top, middle, and low based on a set of criteria they created instructional sequences for students based on their strengths and weaknesses within the data. Regardless of the inconsistencies the teachers experienced in either grouping students for literacy instruction, constructing activities for each respective group's instruction, or interpreting why students scored the way they did on their PALS-K assessments, the kindergarten teachers used similar lesson plans throughout the year to instruct their students. It is important to note that I did not have three lesson plans to compare for each of the teachers. However, I utilized the evidence I had in the data corpus to determine the forthcoming patterns. Through my analyses of teachers' lesson plans for September, October, and December, and their corresponding classroom observations by the RT, yielded three significant patterns:

1. Lesson Plans and Observations in September 2014 (Prior to Fall PALS-K) were similar for all three instructional groups;
2. Lesson Plans and Observations in October 2014 (During Fall PALS-K) were similar for all three instructional groups; and
3. Lesson Plans and Observations in December 2014 (After PALS-K) were different for each instructional reading groups.

Pattern 1: Lesson Plans and Observations in October 2014 were Similar for All Three Instructional Groups.

In September 2014, the RT visited the five classroom teachers and observed their reading instruction. This was the first visit of the RT to BRPES for the 2014-2015 school year. Two of the five kindergarten teachers provided the RT with lesson plans to use during the classroom observations. While there were only two lesson plans, both teachers used the same template for recording the day's instructional activities for their students. In September 2014, the classroom observations by the RT took place *before* the Fall PALS-K assessment window opened. Therefore, lesson plans were written and the observations occurred before current literacy assessment data were collected. All five kindergarten teachers had their students sorted into instructional groups based on the students' pre-Kindergarten screening in April 2014. However, those data were five months old before the first observation and lesson plans were collected by the RT.

Instructional Activities Were Similar in Each Instructional Reading Group. Ms. Bentley and Ms. Burns, who provided the RT copies of their lesson plans in September 2014, had similar instructional activities not only for the students within their respective instructional reading groups but also similar activities across both classrooms.

The only differences in the two lesson plans were Ms. Bentley planned for students to have an activity on alphabet matching for all three instructional groups, and Ms. Burns planned for her low instructional group to have an activity on modeling reading by pointing to words during reading. Table 4.3 provides the lesson plan activities for Ms. Bentley and Ms. Burns, respectively in September 2014.

***Table 4.3*:** Lesson Plan Activities for Bentley and Burns – September 2014

Teacher	Top Instructional Group	Middle Instructional Group	Low Instructional Group
Bentley, Anderson	Poem – *Happy Hippo* Track Alphabet for Sounds **Alphabet Matching** Phoneme Blending COW Work with Sentences in the Poem Identifying Letters in Students' Names Word-Study Features /an/ and /ad/	Poem – *Happy Hippo* Track Alphabet for Sounds **Alphabet Matching** Phoneme Blending COW Work with Sentences in the Poem Identifying Letters in Students' Names Word-Study Features /an/ and /ad/	Poem – *Happy Hippo* Track Alphabet for Sounds **Alphabet Matching** Phoneme Blending COW Work with Sentences in the Poem Identifying Letters in Students' Names Word-Study Features /an/ and /ad/
Burns, Christina	Poem – *Happy Hippo* Track Alphabet for Sounds Phoneme Blending COW Work with Sentences in the Poem Identifying Letters in Students' Names Word-Study Features /an/ and /ad/	Poem – *Happy Hippo* Track Alphabet for Sounds Phoneme Blending COW Work with Sentences in the Poem Identifying Letters in Students' Names Word-Study Features /an/ and /ad/	Poem – *Happy Hippo* Track Alphabet for Sounds **Model How to Read by Pointing to Words** Phoneme Blending COW Work with Sentences in the Poem Identifying Letters in Students' Names Word-Study Features /an/ and /ad/

Observations Noted Similar Literacy Experiences for Students. For students in Ms. Bentley's and Ms. Burns' classrooms the lesson plans were very similar with a few noted exceptions, the observations by the RT noted similar experiences for students.

For example, in Ms. Burns' class, Researcher A, who observed the low instructional group, noted,

> "Students are being told the expectation before they go to centers. Centers – ABC tracing with more tracing sheets in binder. Some students are on computers on Starfall. Some are wiggly after finishing their activity. Similar activity as previous class. At kidney table with teachers, students are tracking their poem of the week. After tracking, [teacher] shows students sight words from the poem and asks students to tell her what the word is. When they get it wrong, she asks them to say the poem in their head until they get to that word. Students are unable to do as she says so she gives them the word." (Classroom Observation, Observer A, September 12, 2014)

Similarly, Researcher B noted the following in the observation of the same class during the same time,

> "As we come in, the teacher is reviewing the seatwork directions and then moves herself and the students into centers and groups. She begins by working on letters with her small group. The students pull letters cut apart from names out of bags. They have one card with their full name to go along with the letters of their name that have been cut out. She has each child put their name letters in order and has them read the names to her. She pulls out a sheet that looks like the COW activity on the PALS. Pictures on one side for memorizing the poem, words on the other side so they can practice finger pointing. They go right to the side with the words. She has them read with her and then to a partner. Then they read the poem and try to track it with their fingers. She then asks sight words from the poem and when the students can't give it to her, she tells them the word." (Classroom Observation, Researcher B, September 12, 2014)

Likewise, in Ms. Bentley's classroom, Researcher C noted of the middle instructional group,

> "We entered [Ms. Bentley]'s classroom and the kids were wrapping up morning breakfast and whole group reading. [Ms. Bentley] was telling them instructions for their groups. The group back at the table (ladybugs) was told to point to words in the poem *Happy Hippo*. Then [Ms. Bentley] asked them to find words in the poem based on their letter sounds. When students could not say the word, she told them. Then she sent them to their seats for seat work which was a worksheet." (Classroom Observation, Researcher C., September 12, 2014)

Also, Researcher A observed in Ms. Bentley's classroom the middle instructional group,

> "Kids are squirmy at the table. The ladybugs are at the table. The group at the table cannot come up with the word she is asking in the poem *Happy Hippo* so she tells them the word. They read the poem and pointed to the words but now they can't find the words she is asking. The kids at the centers are rolling on the floors. She then sends the kids at the table to their seats for a worksheet. She then calls the "Bees" to the table." (Classroom Observation, Researcher A, September 12, 2014)

Summary of Pattern 1: Lesson Plans and Observations in September 2014 (Prior to Fall PALS-K) were similar for all three instructional groups. In September 2014 prior to the administration of the Fall PALS-K, the two teachers who submitted lesson plans had very similar instructional activities not only for the groups within their classrooms but also across both classrooms. There were very small differences in the plans. The observers noted, too, in their classroom visits of the same experiences for the low and middle instructional groups including the same strategy for helping students figure out the word within a poem.

It is important to note that whether or not the instructional activities of students in each instructional group were appropriate in the sequence of learning to read, I created this pattern as to what the kindergarten teachers provided in their lesson plans and observers noted in their classroom observations.

Pattern 2: Lesson Plans and Observations in October 2014 (During Fall PALS-K) Were Similar for All Three Instructional Groups

In October 2014, the RT visited all five classrooms again and noted their observations. For this observation period, two of the five kindergarten teachers provided the RT with lesson plans for their visit. Teachers who provided plans included: Bentley and Burns. Ms. Lewis, Ms. Nottoway, and Ms. Vaughnway did not provide their lesson

plans to the RT. For this round of observations, two of the teachers (Bentley and Burns) were still in the middle of the Fall PALS-K administration, while three (Lewis, Nottoway, and Vaughway) had completely finished their testing. However, the two teachers who provided lesson plans, still had students sorted in the same groups based on the April 2014 Pre-K screening data. Those data were six months old.

Instructional Activities Were Similar in All Three Instructional Groups.

Both kindergarten teachers who provided the RT copies of their lesson plans in October 2014 had similar instructional activities for all three instructional reading groups. In addition, not only were the instructional activities similar to those within the classrooms but also across the both classrooms. The only differences in the two lesson plans were the word study features for the top and middle instructional groups were the same, but the low instructional group was different. Table 4.4 provides the lesson plan activities for Ms. Anderson and Ms. Burns, respectively in September 2014.

***Table 4.4*:** Lesson Plan Activities for Bentley, Burns, Nottoway, and Vaughnway – October 2014

Teacher	Top Instructional Group	Middle Instructional Group	Low Instructional Group
Bentley, Anderson	Poem *Peter, Peter Pumpkin Eater* Alphabet Ordering Word Study Features –ad and –ag Finger Pointing	Poem *Peter, Peter Pumpkin Eater* Alphabet Ordering Word Study Features –ad and –ag Finger Pointing	Poem *Peter, Peter Pumpkin Eater* Alphabet Ordering **Beginning Sounds /l/, /c/, and /f/**, Finger Pointing
Burns, Christina	Poem *Peter, Peter Pumpkin Eater* Alphabet Ordering Word Study Features –ad and –ag Finger Pointing	Poem *Peter, Peter Pumpkin Eater* Alphabet Ordering Word Study Features –ad and –ag Finger Pointing	Poem *Peter, Peter Pumpkin Eater* Alphabet Ordering **Beginning Sounds /l/, /c/, and /f**/, Finger Pointing

Observations Noted Similar Literacy Experiences for Students. For students in Ms. Bentley's and Ms. Burns' classrooms, since the lesson plans were very similar with a two noted exceptions, the observations by the RT noted similar experiences for students. For example, Researcher B noted for the low instructional group in Ms. Bentley's classroom,

> "Teacher says, 'Do you remember what we're talking about this week?' Students don't remember. 'Say poem title for last week.' The teacher then tells them the name of the poem. Passes out *Peter, Peter Pumpkin Eater* on colored paper. 'First things first, let's look at the first line. County how many words.' Students show four on their fingers. 'How many times are we going to point? Pumpkin is a two-syllable word. Remember, we've talked about the spaces. This means we're picking up our finger and moving it along.' Students trying the first two lines on their own as teacher watches them. Four out of five students track correctly; fifth does with teacher support. 'You guys did a great job with the first two lines, let's see if we can do the third line'. Teacher models and then group does it together two times. Then read all three lines as students. 'I'm going to call out a word today and see if you can find it. Pumpkin. See you if you can listen to the beginning and ending sound.' Checks with one student. Does not check with the other four students. Students told to go to seatwork and calls for a student to stop tapping his pencil." (Classroom Observation, Researcher B, October 12, 2014)

Similarly, Researcher A noted for the low instructional group in Ms. Bentley's classroom,

> "Students in low group at table. One student finds pumpkin. Other four students do not. Teacher tells kids to go back to seats. Tells one kid to stop tapping his pencil. Kids squirmy doing worksheet." (Classroom Observation, Researcher A, October 12, 2014)

Meanwhile, in Ms. Burns' classroom, the middle instructional group was observed,

> "T[eacher] working with group of five students at the kidney table on the Peter, Peter poem. T[eacher] tells one student, 'I like how I saw you touch a word wrong and go back and fix it.' T[eacher] asked one student to track poem. Student did it on his own. T[eacher] asked another student to track the poem. She couldn't do it on her own; t[eacher] started pointing with her on the third word of the first line. Last student could do it on her own. T[eacher] says, 'Tell me something we need…' Students couldn't answer. T[eacher] said, 'Bounce.

> How many times do we bounce each word? How many times do we touch each word?' Student reads poem. T[eacher] says, 'How many times did you touch each word?' S[tudent] doesn't answer. T[eacher] asks again, 'How many times did you touch each word? I need an answer.' S[tudent] still doesn't respond. T[eacher] says time to change groups." (Classroom Observation, Researcher B., October 12, 2014)

Moreover, Researcher C observed in Ms. Burns' middle instructional group as

> "[T]he kids don't seem to know what they are doing when tracking words. They seem to drag their finger and not really understand what they are touching. Teacher tell students to bounce which means some bounced in their seats. Teacher asked student how many times did he touch each word and student didn't answer. She asked again, and he didn't answer. Teacher said time to change groups." (Classroom Observation, Researcher C, October 12, 2014)

Summary of Pattern 2: Lesson Plans and Observations in October 2014 (Prior to Fall PALS-K) were similar for all three instructional groups. In October 2014 during the administration of the Fall PALS-K, the two teachers who submitted lesson plans had very similar instructional activities not only for the groups within their classrooms but also across both classrooms. There were very minute differences in the plans. The observers noted in their classroom visits of the same experiences for the low and middle instructional groups including the same strategy for helping students figure out the word within a poem.

It is important to note that whether or not the instructional activities of students in each instructional group were appropriate in the sequence of learning to read, I generated this pattern from the information the kindergarten teachers provided in their lesson plans and observers noted in their classroom observations.

Pattern 3: Lesson Plans and Observations in December 2014 (After PALS-K) Were Different for Each Instructional Reading Groups

In December 2014, the RT visited the five classroom teachers and observed their reading instruction. This was the third visit of the RT to BRPES for the 2014-2015 school year. All five of the kindergarten teachers provided the RT with lesson plans to use during the classroom observations. In December 2014, the Fall PALS-K administration had already taken place and teachers had analyzed their literacy assessment data and completed their TAP#1 with the RT. All five kindergarten teachers had their students sorted into instructional groups based on the students' Fall PALS-K assessment results, which was approximately two months old during this observation by the RT.

For this observation cycle, the RT noted very different experiences for the instructional reading groups within each classroom as well as different instructional experiences for the same groups across the grade level. For example, the top instructional group had similar experiences in each of the five kindergarten classrooms but different experiences within their own classroom. However, the same conclusion could not be made for the middle and low instructional groups. In some classrooms, the middle and low instructional groups had similar, if not the same instructional activities planned, whereas in other classrooms, the instructional activities were different. In one lesson plan, Ms. Vaughnway, it was unclear to me as to what group her description of "Gingerbread Man" was for and it did not contain instructional activities to go with the poem.

Since the RT had all five kindergarten teachers' lesson plans, I created Table 4.5 to note the instructional activities for each reading group across the kindergarten classrooms for December 2014.

***Table 4.5*:** Kindergarten Teachers' Lesson Plans for December 2014

Teacher	Top Instructional Group	Middle Instructional Group	Low Instructional Group
Bentley, Anderson	Beginning reader lesson plan Fluency Level "D" books Sentence writing Word study –et and –eg	Beginning reader lesson plan Fluency Level "C" books Sentence writing Word study –ag and –ad	ABC tracking out of order Rhyming Syllables Poem "Gingerbread Man" Word Study –ag and –ad
Burns, Christina	Beginning Reader Lesson Plan Level "C" book Dictating sentences No Word Study features selected	ABC tracking Syllables Tracking No word study features listed	ABC tracking Syllables Tracking No word study features listed
Lewis, Misty	Level "D" books Dictation Features –ug, -ig, -ag, & -og	Level "C" books Dictation Features –in, -ig, and -ip	Poem Track abc's in random order Features y, l, and q
Nottoway, Jamie	Level "C" books Dictation working on features space and periods. Word study features –at, -et, and –it	Poem "Gingerbread Man" Rhyming Word study features –ip, -in, & -ig	Sentences Syllable sort Word study features t, g,h, p
Vaughnway, Kerrighan	Level C books Dictation No word study features listed	* Unsure what group is being served with the LP from this date. The poem is "Gingerbread Man"	* Unsure what group is being served with the LP from this date. The poem is "Gingerbread Man"

For the classroom observations, during this observation period, Researchers D and E completed running records for their visits to each classroom. Their experiences are

noted in the following excerpts of the top instructional group observations. First in Ms. Burns' classroom,

> "T[eacher] is at the kidney table with s[tudents]. There are index cards spread out in the middle of the table. T[eacher] says, 'I am introducing a new book, *The Lucky Duck*. What kind of weather do you see? Do you like rainy days? Do you think ducks like rainy days? Mom calls rainy days duck days. Let's take a book walk.' The t[eacher] goes page by page and asks students to share what they see on each page. Ask other question for certain pages, 'Who came to help him? Do you think that truck will come to help him? What happens at the end? Are they stuck anymore? I would like you to try reading this book one time by yourself. If you get stuck look at a picture and sound it out.' After students read the book silently, t[eacher] tells s[tudents] to put book back in folder and tells them they will reread it tomorrow. T[eacher] tells the students to go back to their seats and begin sorting." (Classroom Observation, Researcher D, December 11, 2014)

Then in Ms. Nottoway's top instructional group,

> "T[eacher] says, 'We've been working on making a picture in our mind. Who remembers? Students think about what it looks like when closing your eyes and not looking at thet pages.' T[eacher] has s[tudents] repeat and t[eacher] rephrases: 'But what are you doing? You're thinking. Thinking about what it looks like in your brain. This is a story without many pictures. Sometimes you don't have a picture to look at. You have to make a picture in your mind.'" (Classroom Observation, Researcher E, December 11, 2014)

While both observations were of the top instructional group, the learning experiences within the two classrooms are different. Whereas in September and October, respectively, the learning experiences of the students were very similar across the grade level as well as the classroom.

In terms of the middle instructional group, Researchers D and E found differences in the classroom experiences of the students. Specifically, in Ms. Bentley's classroom,

> "T[eacher] finishes up a walk-through of the book and tells s[tudents] to start whisper reading on their own. T[eacher] listens to b[oy] read one page. T[eacher] encourages b[oy] to sound out GROW. B[oy] sounds out word with teacher touching different parts of the body /g/r/o/w/. T[eacher] makes the /w/ sound at the end of GROW but then says GROW with no explanation. S[tudent] continues using this strategy for other words on his own ("pick" and "here").

> Two s[tudents] finish reading the book and close the book. G[irl] just spins her book and then starts watching the other b[oy] read his book and starts sounding out words with him. G[irl] is trying to show him how to sound out the word PIE - /p/i/e/. (Makes the short /i/ and short /e/ sounds). T[eacher] tells s[tudents] to put books in reread basket and go to their seat to begin seatwork." (Classroom Observation, Researcher E, December 11, 2014)

Meanwhile, in Ms. Lewis' classroom, her middle instructional group is observed,

> "T[eacher] holds up the new book for the week, BIG Guided Reading Level C. T[eacher] holds a copy of the book and talks about what she sees in some of the pictures and how the cup in the story is very big for the bug but small for the others. T[eacher] directs s[tudents] to a 'tricky word' on one page – EYES. She explains this word doesn't follow the 'rules' and s[tudents] just need to know it when look at it. T[eacher] does not provide explanation as to why (sight word). T[eacher] continues going through the book. S[tudents] with much redirection, pays attention to the t[eacher] going through the book to prepare them for reading. She asks the s[tudents] to read it silently while she checks on the s[tudents] in another group. Most s[tudents] began to talk with one another while the t[eacher] was away from the group." (Classroom Observation, Researcher D, December 11, 2014)

Again, while both observations are of the middle instructional group, the learning experiences within the two classrooms are different. Whereas in September and October, respectively, the learning experiences of the students were very similar across the grade level as well as the classroom.

For the low instructional groups, Researchers D and E visited Ms. Vaughnway's classroom and Ms. Bentley's classroom. The RT was already in Ms. Bentley's classroom when the groups changed from middle instructional group to low instructional group. The following is an excerpt from the observation of the low instructional group within Ms. Bentley's classroom,

> "T[eacher] gathers s[tudents] attention and switches groups. Owls go to t[eacher], ladybugs to seatwork, and Bees go to centers. S[tudents] move around the classroom to new spots. T[eacher] says to s[tudents] in her group, 'What are we reading this week? Does anybody remember the name of the poem?' S[tudents] don't answer. T[eacher] says, 'What do we bake this time of year? Does anybody know?' S[tudents] still do not answer. T[eacher] says, 'Okay we are

> reading the Gingerbread Man. Can anyone point to the word gingerbread.' S[tudents] point to the picture of the gingerbread man on the cover. T[eacher] says, 'I said the word not the picture. How do you know which word is gingerbread?' S[tudents] don't respond. One s[tudent] begins to spin his page around his finger on the picture. T[eacher] redirects him. At that time, another t[eacher] comes in to the room to talk about another s[tudent]. [Ms. Bentley] tells students to read the poem silently while she talks to [teacher]. S[tudents] begin to squirm in their seats and poke each other while t[eacher] is talking to [teacher] in the room. After several minutes, the t[eacher] comes back to the group and says, 'We are out of time. Tomorrow we will read this and I hope all of you come to group with your thinking caps on.'" (Classroom Observation, Researcher E, December 11, 2014)

During Ms. Vaughnway's low instructional group, the RT observed the following,

> "T[eacher] asks b[oy] in her small group, 'Can you circle the letters that make the /llllll/ sound?' Then she repeats her question with the /k/. After not getting either right, the b[oy] sits quietly while the teacher asks the g[irl] next to him to do the same thing. She was able to get the /l/ but not the /k/ and circled words that began with /c/. The teacher says, 'That word does not begin with the /k/ sound. Try again.' The g[irl] tries again and still misses the word "kite" and circles the word "cart." The t[eacher] goes to the next student, a b[oy] and asks the same question. The b[oy] circles all words on the first row and none of them begin with /l/ or /k./ The t[eacher] then tells the s[tudents] it is time to switch groups and to go to center." (Classroom Observation, Researcher D, December 11, 2014)

In both experiences, the low instructional group were similar in that students were working with their letter-sound knowledge to either point to words or find words that began with the same sound.

Summary of Pattern 3: Lesson Plans and Observations in December 2014 (After PALS-K) were different for each instructional reading groups. For the first time since the RT began observing kindergarten classrooms in the 2014-2015 school year, teachers provided different lesson plans for each instructional group within their classrooms, with a few minor exceptions. Generally speaking, the experiences of each group were different, however, during the middle and instructional groups' observations, the Observers for the RT noted that erroneous answers were given by students, for

example in Ms. Bentley's classroom with the student pronunciation of the word "pie," or in Ms. Vaughnway's classroom with the difference between the /c/ and /k/ sounds, and no teacher explanation was provided as to why those answers were wrong. In addition, there was an instance where the teacher was distracted by another colleague coming into the classroom and interrupting instruction, as in Ms. Bentley's classroom.

It is important to note that whether or not the instructional activities of students in each instructional group were appropriate in the sequence of learning to read, I formed this pattern as to what the kindergarten teachers provided in their lesson plans and observers noted in their classroom observations. This will be further explored through recommendations in Chapter 5.

Administrative Influences

In the foregoing two sections, I answered my first two research questions using TAP#1, TAP#3, lesson plans, and observations from the RT. In this last section, I answer my third research question: *To what extent does the organizational and political context of the school influence the process of teachers using data?* To answer this question, I reviewed the interviews of both the principal of BRPES, Ms. Kimberly Huffman[14], and the exit interview of the Director of Elementary Education for PCPS, Ms. Kellie Woodard[15], at the conclusion of the 2014-15 school year. In addition, I conducted a follow-up interview with Ms. Woodard. As of the 2014-2015 school year, Ms. Huffman had been the principal of BRPES for 3 ½ years. Likewise, as of the 2014-2015 school year, Ms. Woodard had been the Director of Elementary Education for 4 ½ years.

[14] Pseudonym
[15] Pseudonym

When I interviewed Ms. Woodard in February 2019, she had been the Director of Elementary Education for the past 8 ½ years and was an elementary teacher, literacy instructional coach, elementary assistant principal, and an elementary principal before moving to Piedmont County Public Schools to serve in a district-level leadership position. Our follow-up interview meeting was over 75 minutes long, recorded in mp.3 format, and professionally transcribed. The final semi-structured interview protocol can be found in Appendix A.

Review of Coburn and Turner's (2011) Conceptual Framework

As noted in Chapter 1, I utilized Coburn and Turner's (2011) framework for teachers' data-analysis processes. However, to answer my third research question and ultimately understand how the organizational and political context influences the processes teachers use to analyze their data. More specifically, I wanted to see if the teachers' data analyses in their TAP#1 and TAP#3 interviews were shaped in significant ways by the organizational and political contexts in which it takes place. Coburn and Turner (2011) explain that *data-use routines, access to data,* and *leadership* all impact teachers' data analyses, and thus, their data-use practices.

In terms of *data-use routines*, Coburn and Turner (2011) define this as "a repetitive, recognizable pattern of interdependent actions, involving multiple actors" (p. 181. These routines can be informal, such as the principal asking for data-analysis reports of the teachers, or formal such as grade-level meetings or professional learning communities that take place at specific points during the school year (Coburn & Turner, 2011). During my initial analyses of the TAP#1 and TAP#3 interviews of kindergarten teachers, I did not note any formal data-use routines in their responses. Rather, did not

note any data routine at all as I did not find a data routine mentioned until I read the interviews of Ms. Huffman and Ms. Woodard that took place in 2014, and then in my follow-up interview in 2019.

In terms of *access to data*, Coburn and Turner (2011) describe as teachers having the ability to extract their own data without having to rely on someone else for them. I noted in Chapter 3 that the teachers had 24-hour access to their literacy assessment data either electronically through the PALS-K website for their PALS-K assessment data or formal running records, and their own files for their quick checks and informal running records. It is important to note that for the data needed for this research project, the teachers had complete access to them. However, for assessment data in other subjects, it is unknown as to whether or not teachers had access to their data. Nonetheless, for this research question, access to data was not addressed as teachers already had the capacity to store and retrieve their literacy data on their own, as this project was based on literacy only.

Finally, Coburn and Turner (2011) state *leadership* as "school and district leaders play an important role in influencing teachers' data-use practices" (p. 180). District and school mandates, policies, and practices all influence teachers in their decision making (Coburn & Turner, 2011). In this capstone project, my third research question focuses on these influences and how they may have affected teachers' meaning making of their data, and thus, their judgements about students' literacy instruction.

I used this portion of Coburn and Turner's (2011) conceptual framework to analyze my third research question.

My analyses of TAP#1 and TAP#3 allowed me to sense there were some leadership influences over their data analyses. Coupled with my TAPs analyses, I analyzed the initial interviews and follow-up interview against the teachers' responses which yielded two significant patterns with respect to the extent the organizational and political context of the school influences the process of teachers using data. They were:

1. Teachers believe leadership "only allows" three instructional reading groups; and
2. Teachers' misconception of leaderships' data preference to make their instructional reading groups, as well as, book-level required for first grade.

Pattern 1: Leadership "Only Allows" Three Instructional Reading Groups

Throughout TAP#1 and TAP#3, a pattern emerged regarding the leadership mandate of only allowing three instructional reading groups in the kindergarten classrooms. Numerous times during the TAP interviews, teachers brought this to the attention of the RT and used their perception of this mandate to influence their placement of students into groups for literacy instruction. For example, as Ms. Lewis explained in her TAP#1 interview, she not only was allowed to have more than three instructional reading groups but also, was concerned about the management of more groups:

> "So I have to play around. Where am I going to put them? I am not allowed to have more than three reading groups and I can't see myself managing four groups and be effective with it. So, I have to hold it to three. What I think I'm going to do, because I've put some though into this just because I have to plan for next week, is alter my middle group. It's only going to have four in it this time. My top group is going to have seven. My lower group is going to have six." (TAP#1 Interview, October 17, 2014)

Ms. Vaughnway noted as well that she "could only have" three groups but that she had to finagle the students within those groups in order to meet the perceived leadership

expectation of the number of instructional reading groups. In her TAP#1 interview, Ms. Vaughnway explained:

> "I use this to make my groups, my reading groups. And I really only supposed to have three, which is fine for Kindergarten. I think I will move [Student A] to my upper or top group. He was receiving Title I services with Mrs. Talbert. And his mom is very involved and very interested in what she could do to help him. And I think with all of the combined support he will make tremendous progress. So he is now moved up to my top group, so now I am able to divide my kids up into three groups because that's all I could have had anyway." (TAP#1, October 2014)

Ms. Lewis justified keeping a student in the low-instructional reading group instead of the middle-instructional reading group because:

> "Yes, I was kind of looking at the scores and when I looked at my groupings and realized I already had three and couldn't have more, I was trying to use the spelling portion as a way to help me see where some of their strengths are, and where they would best fit because even though some of them tested firm on COW, I didn't necessarily want to bump them way up to my highest group if they are not applying the knowledge that they have. Some of them have great letter rec[ognition]. They have great sound knowledge. So kind of looking to see when I was forming my middle group, and then again looking at those three students, I am moving them back to the low group because that is where they would be best placed. It was kind of another way to reassure myself that I'm putting them where they best need to be. I have make sure the students in the group best fit together." (TAP#1 Interview, October 17, 2014)

Likewise, Ms. Nottoway indicated she had a student who would have been placed in the top-instructional group due to his COW being firm, but due to his spelling behavior being similar to those in the low-instructional group, she moved him there. Her comments in TAP#1 included:

> "I noticed that this one student got a seven on his COW list. So that would put him in one of my book groups like the top group but when I went back and looked at his spelling and sounds his letter sounds are fairly solid with a 21 but his spelling was only a 4. So he has COW and a lot of sound knowledge but his spelling didn't fit within my top group so I went ahead and put him in my low group. That would even out my groups because I like them even and I can't put

> him in his own group due to our rule of three." (TAP#1 Interview, October 20, 2014)

This theme was also pervasive in the TAP#3 interviews as well. Teachers stated that they were only allowed to have a specified number of groups regardless of what that meant for student-learning needs throughout the year, particularly for select students in the top-instructional group. Throughout a couple of the TAP#3 interviews, teachers described not being able to meet all of the students'' needs because of only being "allowed to have" or "only having time for" three instructional groups. Sometimes, students were "held back" into a lower reading group not because their literacy assessment data implied there was a need for that level of instruction, but because there were not enough students to warrant "another" group. The teachers called these students "outliers." For example, Ms. Bentley explained in her TAP#3 interview that,

> "This will probably be the third week that [Student A] is on Level-G. [Student A] is one of my higher ones. Mid-year she tested into the first-grade reading passage but according to how we're only allowed and we only have time for three groups. I had to place here somewhere and they started at a Level-E, so with [Student A] I felt like some things I could have done for her was maybe if we had had other groups that were more up to par with that level, maybe pair them together and move them around the classrooms. Really focus on that because, I mean, she's got it." (TAP#3 Interview, May 6, 2015)

Likewise, Ms. Burns expressed how she was unable to assist with moving one of her students ahead because she did not have other students with similar learning needs:

> "When I tested [Student A] at mid-year, she tested in frustration on the second-grade level mid-year PALS, which for me was very impressive. But, I didn't have other students who met that same goal so I couldn't create another group because that would put me over the three I can have. [Student A] is currently working in my Level-G group and I think right now she could probably be on a [Level]-J instructionally at least. So I was not quite able to meet her that way but she's still learning decoding strategies, but I could have definitely pushed her higher." (TAP#3 Interview, May 6, 2015)

Additionally, Ms. Lewis revealed the sentiment of "doing her best" when discussing an advanced reader in her class and being unable to meet her needs due to only having three instructional reading groups. Specifically, Ms. Lewis lamented:

> "And then my last student is [Student A.] Very, very, very bright. Very, very, very active. And again, his notebook, it's the same kind of thing. With [Student A] his group is currently reading at an [Level]-F. So they are a couple levels ahead of where they need to be at the year's end. [Student A], however is probably, if I had to guess, a reading level for him would probably more in the [Level]-G or [Level]-H range. There's always the outlier children so it's kind of what do I do for that one child by myself. I don't have enough students to constitute another group for that, which is always kind of an issue because we only have three. I was able to fill the two girls in elsewhere, but we can't always – you make the best with what you've got. When you have outliers high sometimes it's not always a perfect solution for them." (TAP#3 Interview, May 6, 2015)

Moreover, Ms. Vaughnway expressed to the RT in TAP#3 how she had an advanced student who had to stay in a lower group due to the leadership presupposition of a specified number of reading groups. She noted about her respective student that:

> "We did trials, he tested on instructional [L]evel-I at 97 percent. He is probably the top reader within my class and even though he's been in my top group, he's above that group, but because we can only have three reading groups, he has to sit there. I would tell first grade to supplement his reading a little bit and by adding a little bit extra, and having him write a little bit more for homework component to go with his book that he was reading for homework." (TAP#3 Interviews, May 6, 2015)

Ms. Nottoway even arranged for two of her students to go to Ms. Vaughnway's classroom during reading instruction because there were more students there that her two would "fit" with instructionally. Ms. Nottoway justified this move by saying:

> "And so because of our groups testing firm but not fitting with my other groups that were in books much longer, Ms. [Vaughnway] has actually taken [Student A] and [Student B] that tested firm according to that quick check. So they've been going into books where they most fit. But they didn't get there until right now at the end of the year and they are with another teacher so I'm not seeing that part of

> what they're doing during groups. That's what I have to do to keep my groups at three." (TAP#3 Interview, May 6, 2015)

Ms. Huffman's and Ms. Woodard's Responses in 2014-2015. Although the teachers were convinced they were only allowed to have a limited number of instructional groups, in both October 2014 and May 2014, the principal of BRPES and the Director of Elementary Education for PCPS, discredited this influence by stating it was not true nor part of their expectations for literacy instruction. For example, in October 2014, Ms. Huffman stated

> "Three groups within the class? Well that would not be steadfast. That would depend on the data. Like I said, when we began talking with this teacher, we realized four instructional groups would best match her assessment data but she had different thoughts about different students than what the data suggested." (Initial Interview, Principal, October 20, 2014)

Again in May 2015, Ms. Huffman disclosed,

> "So, hopefully having three good reading levels in each classroom is what teachers want, but that sometimes works and it sometimes doesn't. And then the best of plans fail, so that's kind of where we start, with three, but as teachers finish up their data, they may realize they need more groups based on literacy skill need and that's what we will encourage them to make for their classrooms." (Initial Interview, Principal, May 6, 2015)

When the RT asked the same question regarding three instructional reading groups, Ms. Woodard noted in her exit interview in May 2015,

> "That is not a district policy. It is something I would love to go a little bit in-depth in is how they are getting there. We have had conversation, multiple conversations in regards to grouping. First regards to grouping is they'll come to have that conversation and sometimes they're gonna have to service a child on their own it if doesn't fit. We do look at the data with teachers to say, can it fit another group? We've had some teachers experiment that I am gonna send Ashely to Ms. Simpson's room because she has a group like that. Although that in practical purposes work, we haven't seen outcomes working. The homeroom teacher doesn't know what is happening so that's a major issue for us." (Exit Interview, Director of Elementary Education, April 13, 2015)

Because this continued to come up in the May 2015 TAP#3 interviews, I asked Ms. Woodard a similar question in our follow-up interview in February 2019. When talking with Ms. Woodard she clarified the teachers' perceptions and understood why there could be a miscommunication. While there is not a leadership mandate of only allowing three instructional reading groups, Ms. Woodard was confident she knew where the misconception derived. At the end of each school year, teachers are asked to make three groups of students: top-instructional group, middle-instructional group, and low-instructional group. These student groups are then used to make staffing decisions of balancing the types of learners in each of the classrooms the following year. Somehow, the practice of classroom staffing of students turned into a teacher perception of a leadership requirement of having a specific number of groups. Because of this major misconception, teachers were influenced by a perceived leadership mandate that was and made their decisions about their guided reading groups based on an erroneous premise. Ms. Woodard fervidly stated:

> "No, No, there is not a leadership mandate of only allowing three groups. I will say right now that it drives us crazy. While we [the leadership] believe and have said that it is optimally for teacher prep and sanity to have three groups in an ideal situation. What we have said and have given ideas on how you have those kids that maybe don't fit into those three groups then you make a plan for them to meet some other time and let them move along in their literacy development and not stay in a group that doesn't provide them the challenge and complexity of text they are ready to read." (Follow-Up Interview, February 15, 2019)

Summary of Pattern 1: Teachers believe leadership "only allows" three instructional reading groups. Throughout TAP#1 and TAP#3, there were multiple instances of teachers describing how they were only allowed to have three instructional reading groups within their classrooms. After analyzing the initial interviews of Ms.

Huffman, the exit interview of Ms. Woodard, and the follow-up interview with Ms. Woodard, that mandate is the teachers' perception and not the leadership's reality. While Ms. Woodard explained how teachers could have the wrong idea, she explained that teachers have been told this is not a mandate. Recommendations of how to dispel this perception will be discussed in Chapter 5.

Pattern 2: Teachers' Misconception of Leaderships' Data Preference to Make Their Instructional Reading Groups, as well as, Book Level Required for First Grade

Leadership Data Preference to Make Instructional Reading Groups. In the section titled, *Kindergarten Teachers' Data Literacy*, all five Kindergarten teachers stated there were no "official" criteria by the division- or building-level leadership for sorting their students into instructional reading groups. However, all five Kindergarten teachers believed students who scored in the 7-10 (firm) range should be placed in the top-instructional group. Students who scored in the 4-6 range should be placed in the middle-instructional group and students who scored less than 4 should be placed in the low-instructional group. While they understood there to be no official criteria for placing students into groups, four of the five teachers believed they were supposed to use the *Class Summary COW Report* from the Fall, Mid-Year, and Spring PALS-K results and one teacher believed she was supposed to use the *Class Summary WRI* report. All five teachers applied those criteria to the students' score on the reports they understood were leadership mandates to make their instructional reading groups.

When analyzing the initial October 2014 interview of Ms. Huffman, explained she taught the teachers,

> "Okay, the first thing I was looking for and taught the teachers to do, the beginning of the year testing, honestly, was the students that have tested firm for concept of word. I went through each – I printed it by the words in isolation list

> so it was in order that way. I went through to look to see how many students in class were firm. That was the first thing I was looking for, to have a celebration for teachers. That's what I showed them, too. So you start there to look at how we're gonna group students in the classrooms. Then I showed them some of the other areas in the data that might be some holes, I guess, for specific students or some of the weaker ones, and what's going on there. Some classes there's a lot of red. So we are looking at a lot of pieces of information trying to figure out where they would go on a daily basis." (Initial Interview, Principal, October 20, 2014)

This same topic came up again in May 2015 when teachers were regrouping from their Spring PALS-K testing. As can be seen in the section *Kindergarten Teachers' Data Literacy*, all of the teachers stated they used the Class Summary report and the benchmarks students reached for the end of the year to determine their instructional groups. However, as also noted in the section *Kindergarten Teachers' Data Literacy*, the teachers did not disclose the specific intervals of data they used to make their decisions. Ms. Huffman was asked again in her May 2015 interview and she stated,

> "In May, that's when we really go through and look at the information that we have, specifically with PALS. Again, going to those class summaries and then we print and look at least the below level student summaries and kind of where the breakdown happens. I go through and do a little bit of work for the teachers ahead of time and kind of bring it to them to look at when making their final groups. I don't know the names of the reports, I'm sorry, but that's what we use to make the final determinations for the year." (Initial Interview, Principal, May 6, 2015)

In our follow-up interview, I discussed with Ms. Woodard my observation of the TAP#1 and TAP#3 data that most teachers used their COW Summary report to make their instructional reading groups in the Fall and the Class Summary report to make their instructional reading groups in the Spring. She explained that none of the teachers were correct in their data use practices of making informed decisions about instructional reading groups with one report. Rather, Ms. Woodard described,

> "While COW is the compulsory skill for students to obtain in order to read, they also need to have strong letter recognition, sound letter sound recognition, and

> compelling spelling skills. As four of the five teachers demonstrated [in the Fall], the first report from PALS-K to review would be the COW report to make three groups based on the aforementioned criteria. However, they should not have stopped there. Rather, they should have compared the COW results to letter recognition, letter sound recognition, and spelling to determine if students had phonological awareness. With all of those data working in tandem, then teachers would have had a clearer picture of the students' literacy skills and could make informed decisions regarding their guided reading groups." (Follow-Up Interview, February 15, 2019)

Furthermore, Ms. Woodard acknowledged,

> "We were getting better understanding our kids, so that's a plus for us. The negative is that at that time kindergarten teachers saw them so narrowly sliced and who they can be with and how we teach concepts and how I can teach this concept and although this student is here and that student is back there, they can still do. Because at that point, they didn't trust their PALS data to give them the information they knew in their hearts about the kids. So they focused on COW and that's all." (Follow-Up Interview, February 15, 2019)

Leadership Expectations of Specific Book-Level Students Should Master Before Entering First Grade. In the section titled *Kindergarten Teachers' Data Literacy*, five out of five Kindergarten teachers at BRPES stated that students had to master a district- and school-level leadership requisite guided-book level for entering first grade. Four of the five teachers reported a student had mastered Kindergarten expectations and was ready for first grade if he/she is reading Level-C books at the end of the year and one teacher stated students needed to have mastered Level-C books and ready to move into Level-D books. Specifically, Ms. Burns shared how her students mastered kindergarten expectations:

> "So this [Purple] group tested for concept of word mid-year PALS and when we also did the running record they tested into a Level-B [book]. They are currently working in a Level-C [book], which is our end of year goal, but I'm not sure if they'll test independently at a [Level]-C. [We] are working with mixed diagraphs and [they] are able to write multiple complete sentences independently. So, to, me it seems like [they] have mastered the skills we would expect as far as literacy goes." (TAP#3 Interview, May 6, 2015)

Ms. Vaughnway stated in her TAP#3 interview when talking about a particular student that,

> "She's made a lot of progress if we look at her pouch from where she started to where she is now, it has shown improvement. And when I did her running record, she tested on a [L]evel- C to go to first grade, so she will go in below grade level." (TAP#3 Interview, May 6, 2015)

Similarly Ms. Lewis, stated,

> "The ones I would say are [in the low-instructional group] and more than likely – we want them reading Level-D by the end of the year. [Student A] is gonna be right there at the cusp of a D. I'm not quite sure that after I have done my running records it will match up with PALS that she will be independently at a [L]evel-D, but [Student A] is not too far from it." (TAP#3 Interview, May 6, 2015)

When reviewing the initial interviews of the principal and the exit interview of the Director of Elementary Education this misconception did not come up in the transcripts. Therefore, I asked Ms. Woodard in our follow-up interview in February 2019. In my discussion with Ms. Woodard, she explained that there is an expectation that kindergarten students will be through Level-C books before entering first grade.

> "A [Level]-C [book] is where but this is where I get bogged down. It's not just the level but it is also the *behaviors* of readers that we want to see for the first grade. We want them to be tracking, decoding, and fluently reading at a [Level]-C [book] not just getting there." (Follow-Up Interview, February 15, 2019)

By ensuring kindergarten students read beyond Level-C books and ready to begin Level-D books, it "eased the student regression during the summer before entering first grade in the Fall" (Follow-Up Interview, February 15, 2019).

Ms. Woodard explained that there is a confusion about Level-C books for Kindergarten teachers of whether or not students should be *on* Level-C books or *through* Level-C books.

> "I construed this as a vocabulary issue between the words *on* and *through*, but if I stated Level-D books as the threshold for students entering first grade, it would confuse both the Kindergarten *and* the first grade teachers because that is an unrealistic expectation for an end-of-year kindergartener." (Follow-Up Interview, February 15, 2019)

Summary of Pattern 2: Teachers' misconception of leadership's data preference to make their instructional reading groups, as well as, book-level required for first grade. The kindergarten teachers had misperceptions of Ms. Huffman's and Ms. Woodard's preferences for the data they should use to make their instructional reading groups as well as the book-level required for students to enter first grade. After analyzing the interviews of Ms. Huffman and Ms. Woodard, it became clear that these perceptions of policy guided the teachers' data analyses of their literacy assessment data, and thus, mistakenly believed they were following the requests of the administrators, even though the interviews of the leadership described their expectations differently.

CHAPTER SUMMARY

In the foregoing chapter, I answered three research questions that emerged as a consequence of the problem of practice I was trying to address. First, I discussed the patterns that emerged with respect to the ways Kindergarten teachers altered their classroom goals or objectives and modified student-grouping arrangements based on their literacy assessment data. Second, I discussed the patterns that emerged with respect to the extent teachers in BRPES used their literacy data to adapt instruction in response to

students' needs. Finally, I discussed the patters that emerged with respect to the extent the organizational and political context of the school influenced the process of teachers using data. To fully address this problem of practice, though, it is not enough to share my findings; I must also offer recommendations. Therefore, in Chapter 5, I make recommendations to the Director of Elementary Education of Piedmont County Public Schools. I also discuss the implications of my findings relevant to the broader problem of practice of teachers using assessment data to inform instructional decisions. Finally, I share some of the limitations of my study and briefly reflect on my experience as a whole.

CHAPTER 5: RECOMMENDATIONS, IMPLICATIONS, and LIMITATIONS

In the previous chapters, I positioned my capstone project within the greater *A School Year in Kindergarten Classrooms: Literacy and Data Use Practices* research study, highlighted the problem of practice (PoP) I sought to gain insight by completing this study, grounded the PoP by reviewing the relative literature, disclosed the methods used in completing this project, and shared findings in the form of patterns that emerged from the data analysis. My goal for the capstone project, and ultimately, my doctoral program, was to understand the processes teachers use to turn their interim-assessment data into information in order to plan future instruction for students. In this chapter, I offer my recommendations regarding the grant-specific problem of practice to Ms. Kellie Woodard, the Director of Elementary Education for PCPS. I provide implications to the broader, teachers' use of interim-assessment data as a basis for instructional decision making, problem of practice. Finally, I discuss some limitations of my study, including my Conceptual Framework, and conclude with a reflection for my own practice.

Recommendations

As conveyed in Chapter 4, several patterns emerged with respect to the data analyses. These recommendations stem directly from the findings presented in Chapter 4 and are formed by the literature grounding this project.

Recommendation #1: Increase Teachers' Pedagogical Data Literacy of their Data Sources

As discussed in Chapter 4, the kindergarten teachers inconsistently used the data from the PALS-K reports after the Fall and Spring PALS-K testing as well as, their Quick Checks and Formal Running Records to create their instructional reading groups. Not only were the teachers inconsistent within *themselves* in turning their data into information to inform their next steps of instruction but also, *across the entire grade level*. While the teachers explained to the RT through their TAP interviews that they were "using" their data to make instructional decisions, they all did not apply the same criteria for making those decisions. In addition, the kindergarten teachers only appeared to use their PALS-K screening data from each testing window to make instructional decisions, rather than the data they collected more often from the Quick Checks and Formal Running Records. Therefore, I recommend that the Director of Elementary Education for PCPS provide opportunities for kindergarten teachers to increase their pedagogical data literacy skills surrounding the PALS-K screening data as well as the data collected from their Quick Checks and Formal Running Records, in order to understand where their students are in the process of learning to read. Mandinach (2012) defines *pedagogical data literacy* as "[teachers'] ability to understand and use data effectively to inform decisions" (p. 30). By increasing teachers' pedagogical data literacy, teachers would be in a better position to make decisions for placing students in instructional reading groups. Making data-based decisions requires teachers to have specific skills to analyze and interpret data in order to inform their instruction. In the

following sub-sections, I suggest some changes that would bring this recommendation into fruition.

Professional Development (PD). In order to monitor students' progress in their literacy development and plan instruction targeted to meet their needs, the kindergarten teachers must understand the data from the PALS-K screening as well as the data collected from Quick Checks, Formal Running Records, and even informal data sources such as student-work samples. Therefore, I would recommend a series of PD sessions that focuses on the purpose of each assessment while fully explaining the tasks students are asked to do on each assessment. In addition, the PD sessions would help to make the point that multiple data sources are important because no single assessment provides all the information teachers need to make informed instructional decisions. These sessions would be created by the Director of Elementary Education, elementary principals, and individuals with a strong literacy/reading background. To map out the PD sessions, I recommend creating a schedule for the 2019-2020 school year and providing it to the teachers at the beginning of the year so they will know ahead of time as to when these trainings will be held. I also recommend the following components of the PD trainings throughout the year:

- PD#1 = Understanding Kindergarten Literacy Assessment Data: How do PALS-K, Quick Checks, and Formal Running Records provide you with information regarding your students' progress in learning to read?
- PD#2 = Organizing Your Literacy Assessment Data: How can a data "tool kit" help you organize everything you need in order to make data-based decisions?

- PD#3 = Constructing Implications from Your Literacy Assessment Data: How can you make sense of your data to plan future instruction for your students?

In recent years, researchers have increasingly focused on what makes professional development *effective* for teachers. Recent research explores the complex links between the design of professional development (Hord & Tobia, 2012), teachers' learning during professional development activities (Sun, Penuel, Frank, Gallagher, & Youngs, 2013), and subsequent changes in classroom practices (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). In addition, there seems to be a common theme among recent researchers regarding the *purpose* of teacher professional development being:

- "Developing *professional capital* [in] helping people [teachers] to help themselves and help their students more effectively NOT about manipulating them into complying with externally imposed requirements or delivering someone else's vision" (Hargreaves & Fullan, 2012, p. 169)
- "Linking teacher development to improved practice" (Patton, Parker, & Tannenhill, 2015, p. 28)
- "Building the capacity of teachers to help students learn" (DiPaola & Hoy, 2014, p. 101)

Based on the aforementioned purposes of effective professional development, a growing body of empirical research suggests there is a core set of features common in defining high-quality professional development. Researchers posit high-quality professional development is not only job-embedded to increase teachers' knowledge and skills to boost students' learning, but also includes: a content focus, active learning,

coherence, duration, and collective participation (Desimone, 2011; Desimone & Pak, 2017; Patton et al., 2015; Sun et al., 2013).

My recommendation is for each PD session to occur during a kindergarten grade-level meeting at each school within PCPS, but specifically at BRPES, and not last longer than one hour. My rationale for this format is to have shorter, yet sustained, PD sessions in order for teachers to keep the data-analysis process for making decisions about their students' literacy development at the forefront of their instructional planning. In addition, these PD sessions would naturally occur before and immediately after the PALS-K windows in order for teachers to use of their most recent screening data in addition to the data collected from the Quick Checks and Formal Running Records. Table 5.1 provides an example of a typical year-long PD for schedule for PCPS based on the 2019-2020 school year calendar and the 2019-2020 PALS-K Assessment Calendar.

***Table 5.1*:** Literacy PD Schedule for the 2019-2020 School Year – PCPS

Literacy PD Schedule for the 2019-2020 School Year – PCPS		
Date	**Task**	**Location**
August 14, 2019	First Day of School for Students	PCPS
September 16, 2019	PD#1 – Fall (Required)	BRPES K Grade-Level Meeting
September 30, 2019 – October 11, 2019	Fall PALS-K Assessment Window	BRPES K Classrooms
October 7, 2019	PD#2 – Fall	BRPES K Grade-Level Meeting
October 14, 2019	PD#3 – Fall	BRPES K Grade-Level Meeting
December 16, 2019	PD#1 – Mid-Year (if needed)	BRPES K Grade-Level Meetings
January 6, 2020 – January 17, 2020	Mid-Year PALS-K Assessment Window	BRPES K Classrooms
January 13, 2020	PD#2 – Mid-Year	BRPES K Grade-Level Meetings

January 21, 2020	PD#3 – Mid-Year	BRPES K Grade-Level Meeting
March 30, 2020	PD#1 – Spring (if needed)	BRPES K Grade-Level Meetings
April 27, 2020 – May 8, 2020	Spring PALS-K Assessment Window	BRPES K Classrooms
May 4, 2020	PD#2 – Spring	BRPES K Grade-Level Meeting
May 11, 2020	PD#3 – Spring	BRPES K Grade-Level Meeting
May 19, 2020	Joint-Meeting with K and 1 Teachers to Discuss Student Staffing	BRPES K/1 Grade-Level Meeting
May 21, 2020	Last Day of School for Students	PCPS

PD #1: Understanding Kindergarten Literacy Assessment Data. For PD#1, which would be required for the Fall and optional for Mid-Year and Spring, allows teachers to understand how the PALS-K screening, Quick Checks, and Formal Running Records all work together to provide teachers with information about the literacy performance of their students. Through the PD#1 session, I recommend that an essential "take away" for kindergarten teachers is not only to expand their understanding of each assessment they are asked to administer during the school year but also, to gain a robust understanding of student learning needs by collecting data from a variety of sources. By creating this foundation of assessment literacy, kindergarten teachers will recognize the purpose of each assessment as well as, the data that are generated from them.

I recommend that PD#1 also contain a tutorial for the kindergarten teachers of each report in the PALS-K suite and the purposes of each report. In Table 5.2, (also Appendix K), I provide a list of the PALS-K reports as well as their respective purpose, available immediately after assessing each student (Using PALS-K Data to Drive Instruction, para. 12, n.d). In order to build teachers' pedagogical data literacy, it is

important for them to understand what data is available to them in PALS-K and where to find those data. As noted in Chapter 4, the kindergarten teachers confused the COW and WRI reports.

***Table 5.2*:** PALS-K Teacher Reports and Report Description

PALS-K Teacher Reports and Report Description	
Report Name	**Report Description**
Class Summary	This report lists all of the students in the class and their respective scores on each of the tasks on the PALS-K screening. In addition, there are symbols indicating specific information including:  The Red ID symbol means the student was identified in the most recent testing window. "Identified" means the student scored below the benchmark score and may be at risk of developing a reading difficulty. Individual scores in red are below the benchmark for that task. Moreover, students who have this symbol qualify for additional reading instruction.  Scores highlighted in red indicate they are below the benchmark for that task.
Class Concept of Word Report	This report lists Concept of Word scores for all students in the class.
Class Alphabet and Letter Sound Knowledge	This report provides a list of the entire class and each student's performance on alphabet recognition and letter sound tasks.
Class Performance by Task	This table summarizes the Entry Level results for all of the students in the class for the current testing window. A line separates those who were not identified for additional instruction from those who were identified for additional instruction.

Moreover, I recommend that the PD#1 also provides information to teachers regarding the data from the Quick Checks and the Formal Running Records. There should be a uniform procedure for collecting, organizing, and reporting the data from those assessments. As noted in Chapter 4, teachers either recorded these data in their grade books or in their lesson plans. A comparison should be created for the kindergarten

teachers in order for them the understand how to utilize the PALS-K, Quick Check, and Formal Running Record data in order to have a true picture of how students are learning to read and the skills that need to be refined or extended in order to move students forward in becoming literate.

In addition to expanding their understanding of the literacy assessments and the respective data they provide regarding kindergarten students' literacy needs, I also recommend that the teachers understand the tasks the students are asked to complete on each of the assessments. For example, a PALS-K literacy screening will have different tasks for students to complete than a Quick Check or a Running Record. Kindergarten teachers need clarity of the tasks on each assessment so they can understand the purposes and skills each is designed to assess. By thoroughly explaining the tasks for each of the assessments, teachers will understand what students are supposed to know, understand, and be able to do for each respective assessment.

PD#2: Creating a Data "Tool Kit" for the Fall, Mid-Year, and Spring PALS-K Testing Window. For PD#2, I recommend creating a "tool kit" for each of the Fall, Mid-Year, and Spring PALS-K testing windows for the current school year. Additionally, I recommend creating a "tool kit" for the beginning of the year to include students' kindergarten screening data as well as their PALS-PK scores, if applicable. While I make the recommendation for the tool kit to revolve around the PALS-K testing windows, it does not necessarily have to be specifically tied to the windows for PALS-K administration. My thought process was that with the each testing administration and new PALS-K data, it would be a natural time within the school year to use those data to review the configuration of students within each instructional reading group and

determine if their placements still met their instructional needs. In Chapter 4, one of the inconsistencies among the kindergarten teachers was not only how to use the results from PALS-K to make their instructional reading groups but also, how the other pieces of literacy assessment data they collected formally and informally throughout the school year, too, was information about their students' progress in learning how to read. The kindergarten teachers were instructed in their first TAP interview to bring a copy of their Fall PALS-K data to their meeting, but in TAP#3, they were asked to bring their literacy data for discussion, none otherwise specified. All five of the teachers brought their Spring PALS-K data. Therefore, I recommend creating a "tool kit" for teachers to place their data after the Kindergarten Screening, as well as the Fall, Mid-Year, and Spring PALS-K testing administrations in order to have those data all in one location. This allows teachers to have their data all in one place for efficiency when embarking on the process of turning those data into information about student learning. Tables 5.5, 5.6, 5.7, and 5.8, provides the list of literacy assessment data resources to comprise of each "tool kit," respectively.

***Table 5.5*:** Screening Data "Tool Kit" for Instructional Planning – Kindergarten

Fall Data "Tool Kit" for Instructional Planning – Kindergarten	
Kindergarten teachers, ***During Kindergarten Screening, please compile the following pieces of data for your students' literacy development. Please print or copy these sources and either put them in a folder or a notebook in preparation of turning these data into information about student learning. Thank you***	
Item #1	Copy of the completed Kindergarten Screening for each student
Item #2	Copy of Student Summary of their PALS-PK administration, if applicable
Item #3	Copy of D-DAP with the *Before* the meeting component completed prior to the kindergarten staffing meeting.

***Table 5.6*:** Fall Data "Tool Kit" for Instructional Planning – Kindergarten

Fall Data "Tool Kit" for Instructional Planning – Kindergarten	
Kindergarten teachers, ***At the end of your Fall PALS-K assessment window, please compile the following pieces of data for your students' literacy development thus far in the school year. Please print or copy these sources and either put them in a folder or a notebook in preparation of turning these data into information about student learning. Thank you.***	
Item #1	Copy of the *PALS-K Benchmarks and Mid-Year Ranges* Table
Item #2	Copy of *Concept of Word in Text Stage Based on PALS-K Scores*
Item #3	Copy of PALS K Class Summary, sorted by COW ***pointing*** scores – Fall 20__
Item #4	Copy of the most recent Formal Running Record for each student, organized in alphabetical order
Item #5	Copy of the most recent Quick Check for each student, organized in alphabetical order
Item #6	Copy of D-DAP with the *Before* the meeting component completed prior to the grade-level meeting.

***Table 5.7*:** Mid-Year Data "Tool Kit" for Instructional Planning – Kindergarten

Mid-Year Data "Tool Kit" for Instructional Planning – Kindergarten	
Kindergarten teachers, ***At the end of your Mid-Year PALS-K assessment window, please compile the following pieces of data for your students' literacy development thus far in the school year. Please print or copy these sources and either put them in a folder or a notebook in preparation of turning these data into information about student learning. Thank you.***	
Item #1	Copy of the *PALS-K Benchmarks and Mid-Year Ranges* Table
Item #2	Copy of *Concept of Word in Text Stage Based on PALS-K Scores*
Item #3	Copy of PALS K Class Summary, sorted by COW ***pointing*** scores – Mid-Year 20__
Item #4	Copy of the most recent Formal Running Record for each student, organized in alphabetical order
Item #5	Copy of the most recent Quick Check for each student, organized in alphabetical order
Item #6	Copy of D-DAP with the *Before* the meeting component completed prior to the grade-level meeting.

***Table 5.8*:** Spring Data "Tool Kit" for Instructional Planning – Kindergarten

Spring Data "Tool Kit" for Instructional Planning – Kindergarten
Kindergarten teachers, ***At the end of your Spring PALS-K assessment window, please compile the following pieces of data for your students' literacy development thus far in the school year.***

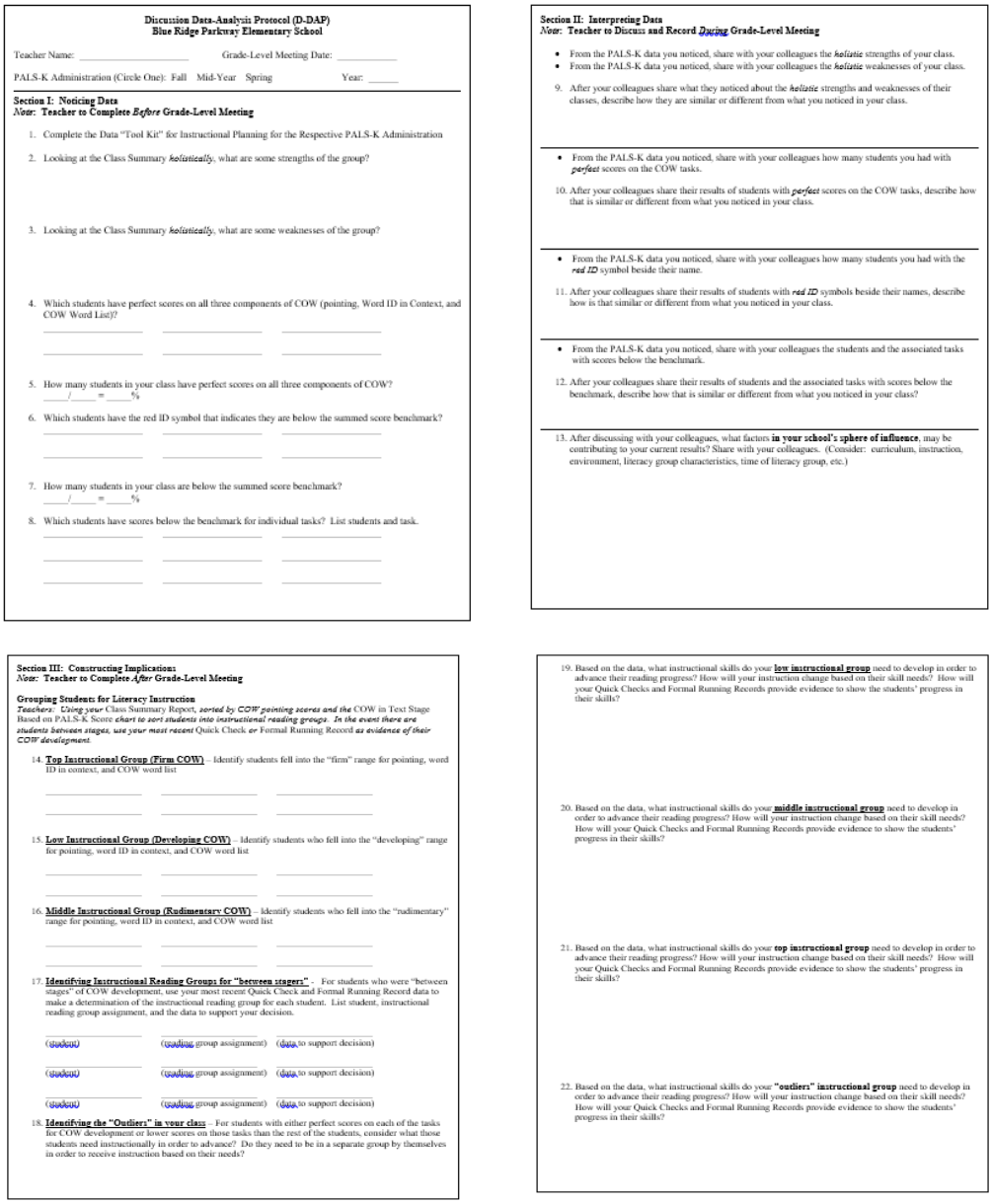
Please print or copy these sources and either put them in a folder or a notebook in preparation of turning these data into information about student learning. Thank you.	
Item #1	Copy of the *PALS-K Benchmarks and Mid-Year Ranges* Table
Item #2	Copy of *Concept of Word in Text Stage Based on PALS-K Scores*
Item #3	Copy of PALS K Class Summary, sorted by COW ***pointing*** scores – Spring 20__
Item #4	Copy of the most recent Formal Running Record for each student, organized in alphabetical order
Item #5	Copy of the most recent Quick Check for each student, organized in alphabetical order
Item #6	Copy of D-DAP with the *Before* the meeting component completed prior to the grade-level meeting.

PD#3: Developing a Data-Analysis Protocol to Guide Teachers Through the Process of Turning Their Literacy Assessment Data into Information. As indicated in Chapter 4, the kindergarten teachers delved into making their instructional reading groups from their PALS-K assessment data. For them, this seemed to be the most important task after administering the PALS-K screening. In both TAP#1 and TAP#3, the kindergarten teachers overwhelmingly described their three instructional reading groups and their thought processes for assigning students to each. My recommendation is to create a more systematic process for teachers' meaning making of their literacy assessment data. By creating a discussion protocol for grade-level meetings after each respective PALS-K assessment window, the time during the meetings would not only be more efficient in identifying students' literacy needs but also, in constructing instructional sequences that matches the students' specific needs.

Figure 5.1 displays my recommended Discussion Data-Analysis Protocol (D-DAP) for the grade-level meetings. There are explicit tasks for teachers to complete *prior* to the scheduled grade-level meeting, as well as, tasks to complete *during* the meeting and *after* the meeting. The goal of the D-DAP is to have a methodological

system for all five kindergarten teachers to turn their literacy assessment data into information about their students' progress in learning to read and ultimately, to make instructional decisions regarding future literacy instruction for each reading group. In addition, it also provides a platform for which the principal or literacy coaches lead the conversation during the grade-level meeting. I provide a larger copy of the D-DAP in Appendix L. The D-DAP follows Coburn and Turner's (2011) conceptual framework of teachers' data use processes. By completing the entire protocol, teachers will have the opportunity to notice, interpret, and construct implications for their students' literacy development.

***Figure 5.1*:** Discussion Data-Analysis Protocol (D-DAP)



Discussion Data-Analysis Protocol (D-DAP)
Blue Ridge Parkway Elementary School

Teacher Name: _____ Grade-Level Meeting Date: _____

PALS-K Administration (Circle One): Fall Mid-Year Spring Year: _____

Section I: Noticing Data
***Note*: Teacher to Complete *Before* Grade-Level Meeting**

1. Complete the Data "Tool Kit" for Instructional Planning for the Respective PALS-K Administration
2. Looking at the Class Summary *holistically*, what are some strengths of the group?
3. Looking at the Class Summary *holistically*, what are some weaknesses of the group?
4. Which students have perfect scores on all three components of COW (pointing, Word ID in Context, and COW Word List)?
5. How many students in your class have perfect scores on all three components of COW? ____/____ = ____%
6. Which students have the red ID symbol that indicates they are below the summed score benchmark?
7. How many students in your class are below the summed score benchmark? ____/____ = ____%
8. Which students have scores below the benchmark for individual tasks? List students and task.

Section II: Interpreting Data
***Note*: Teacher to Discuss and Record *During* Grade-Level Meeting**

- From the PALS-K data you noticed, share with your colleagues the *holistic* strengths of your class.
- From the PALS-K data you noticed, share with your colleagues the *holistic* weaknesses of your class.

9. After your colleagues share what they noticed about the *holistic* strengths and weaknesses of their classes, describe how they are similar or different from what you noticed in your class.

- From the PALS-K data you noticed, share with your colleagues how many students you had with *perfect* scores on the COW tasks.

10. After your colleagues share their results of students with *perfect* scores on the COW tasks, describe how that is similar or different from what you noticed in your class.

- From the PALS-K data you noticed, share with your colleagues how many students you had with the *red ID* symbol beside their name.

11. After your colleagues share their results of students with *red ID* symbols beside their names, describe how is that similar or different from what you noticed in your class.

- From the PALS-K data you noticed, share with your colleagues the students and the associated tasks with scores below the benchmark.

12. After your colleagues share their results of students and the associated tasks with scores below the benchmark, describe how that is similar or different from what you noticed in your class?

13. After discussing with your colleagues, what factors **in your school's sphere of influence**, may be contributing to your current results? Share with your colleagues. (Consider: curriculum, instruction, environment, literacy group characteristics, time of literacy group, etc.)

Section III: Constructing Implications
***Note*: Teacher to Complete *After* Grade-Level Meeting**

Grouping Students for Literacy Instruction
Teachers: Using your Class Summary Report, *sorted by COW pointing scores and the* COW in Text Stage Based on PALS-K Score *chart to sort students into instructional reading groups. In the event there are students between stages, use your most recent* Quick Check *or* Formal Running Record *as evidence of their COW development.*

14. **Top Instructional Group (Firm COW)** – Identify students fell into the "firm" range for pointing, word ID in context, and COW word list
15. **Low Instructional Group (Developing COW)** – Identify students who fell into the "developing" range for pointing, word ID in context, and COW word list
16. **Middle Instructional Group (Rudimentary COW)** – Identify students who fell into the "rudimentary" range for pointing, word ID in context, and COW word list
17. **Identifying Instructional Reading Groups for "between stagers"** - For students who were "between stages" of COW development, use your most recent Quick Check and Formal Running Record data to make a determination of the instructional reading group for each student. List student, instructional reading group assignment, and the data to support your decision.

(student) (reading group assignment) (data to support decision)
(student) (reading group assignment) (data to support decision)
(student) (reading group assignment) (data to support decision)

18. **Identifying the "Outliers" in your class** – For students with either perfect scores on each of the tasks for COW development or lower scores on those tasks than the rest of the students, consider what those students need instructionally in order to advance? Do they need to be in a separate group by themselves in order to receive instruction based on their needs?

19. Based on the data, what instructional skills do your **low instructional group** need to develop in order to advance their reading progress? How will your instruction change based on their skill needs? How will your Quick Checks and Formal Running Records provide evidence to show the students' progress in their skills?
20. Based on the data, what instructional skills do your **middle instructional group** need to develop in order to advance their reading progress? How will your instruction change based on their skill needs? How will your Quick Checks and Formal Running Records provide evidence to show the students' progress in their skills?
21. Based on the data, what instructional skills do your **top instructional group** need to develop in order to advance their reading progress? How will your instruction change based on their skill needs? How will your Quick Checks and Formal Running Records provide evidence to show the students' progress in their skills?
22. Based on the data, what instructional skills do your **"outliers" instructional group** need to develop in order to advance their reading progress? How will your instruction change based on their skill needs? How will your Quick Checks and Formal Running Records provide evidence to show the students' progress in their skills?

Recommendation #2: Developing Teachers' Capacity in Planning For and Instructing With Appropriate Literacy Strategies for Each Instructional Reading Group

As noted in Chapter 4, the kindergarten teachers had the same lesson plans for all three instructional reading groups in September and October, but different lesson plans

for each group in December. In reviewing the teachers' lesson plans, it appears that they not only did not understand a student's development in learning to read but also, how to translate that into plans for literacy instruction. In moving students forward in developing teachers' understanding of how a student learns to read, I recommend the district provide opportunities for kindergarten teachers to develop their capacity in planning for and instructing with appropriate literacy strategies for each instructional reading group *earlier* in the school year than December. The Fall PALS-K window for the 2019-2020 school year begins in late September through the first two weeks in October. By building teachers' knowledge of instructional activities that support each instructional reading group's skill needs, students will receive matched instruction to their skill deficits. In addition, it will be evident that teachers used their literacy assessment data in planning their instruction for students' literacy development. In the next subsection, I discuss how to bring this recommendation into fruition.

Weekly Grade-Level Meetings with Literacy Coaches for Planning Literacy Instruction. As shown in Appendix G, the teachers all used the same lesson plan template, which was from the PALS office, to record their instructional sequences for the week. The template for the lesson plans was the same for all three instructional reading groups, leading to some components not being complete because they did not apply to the group's literacy needs. For example, often times the poem/story, word features, and sentence dictation was listed, but the other parts of the lesson plans were blank. As a result, when I read the lesson plans, I often recorded in my data analysis that information was missing. Perhaps information was not necessarily missing, but not applicable to the groups' instructional needs of the week, or the teachers did not understand how those

components fit within the students' reading development. In addition, I noted in my analyses that the lesson plans often had materials listed for instruction but not the procedures nor the goals of the lesson.

It is my recommendation that teachers meet weekly to discuss student progress and to create instructional plans that contain the goals, materials, and procedures for the following week. By allowing time within their schedule to collaborate and on a regular weekly basis with the literacy coaches, the kindergarten teachers have opportunities to keep literacy instruction and the needs of their students at the forefront of their planning efforts. In addition to planning instruction, teachers would have a routine occasion to discuss their Quick Checks, Formal Running Records, and other observational student data to determine if student groupings need to be changed due to students' reading behaviors. Through the discussions of their Quick Checks, Formal Running Records, and other observational student data, teachers can also discuss how they administer the assessments as well as record observations in order to build their capacity to generate reliable and valid results. To hold teachers accountable for their work within the grade-level meetings with the literacy coach, it is recommended for teachers to have their lesson plans created prior to the week of implementation and submitted to the principal for review and feedback. A two-week interval allows time for adjustments if necessary after principal review.

Creating Classroom Opportunities. During the weekly meetings when data are reviewed and lesson plans are created, my recommendation is for teachers to participate in healthy discourse with a focus on how students' deeper learning can flow from creatively adjusting time, resources, and people to meet the needs of the students. In

Chapter 4, evidence was presented in which many students were either "held back" or "not pushed" to their fullest potential by teachers assigning them to groups of "best fit." Teachers' belief systems of what students were able to do or not do based on preconceived notions of pre-school experience, behavioral concerns, or home-life situations affected their interpretations of literacy assessment data, and thus, the implications for future instruction. By creating an opportunity for teachers to discuss these concerns in the weekly grade level meetings with the literacy coach, they can openly be addressed and ideally, ameliorated, by generating plausible solutions for students to progress in their literacy development. For example, if a kindergarten student is consistently late, utilizing flexible scheduling with an instructional assistant later in the day to provide reading instruction will support the student's needs in not only learning to read but also, in creating a welcoming environment to support his emotional needs.

Recommendation #3: Diffusing Teachers' Misconceptions of Perceived Leadership Mandates

Throughout Chapter 4, teachers repeatedly referenced a (perceived) leadership mandate of only allowing three instructional reading groups in each kindergarten classroom, in addition to, an unclear leadership expectation of the requisite book level kindergarten students were to master prior to entering the first grade. As a result of their perceptions, the kindergarten teachers were influenced while making instructional decisions for either their students' placement within the instructional reading groups or their preparation for first grade. Therefore, I recommend the leadership team of the Director of Elementary Education of PCPS, principal of BRPES, and literacy coaches articulate their vision for instructional literacy groups, as well as, expectations of

kindergarten students' reading levels prior to entering first grade. Therefore, in the next two subsections, I discuss how to bring this recommendation into fruition.

Create a Kindergarten Reading Vision Plan – Prior to the beginning of the 2019-2020 school year, I recommend a meeting of the Director of Elementary Education of PCPS, the principal of BRPES, and the literacy coaches assigned to BRPES. During the meeting, the team will discuss the kindergarten teachers' perception of only allowing three instructional reading groups and convey the expectations of the team in a document called the Kindergarten Reading Vision Plan. The document should dispel the teachers' belief that they are to maintain a specified number of literacy groups, regardless of students' needs. Moreover, it should provide the teachers management suggestions of how to handle the "outliers" on either end of the reading continuum. By coming together during the summer to discuss this misconception, the leadership team can have plenty of time to thoroughly plan and create a document for the new school year and ensure that everyone on the team is on the "same page" with the information provided to teachers.

Next, while discussing and creating the Kindergarten Reading Vision Plan, the expectation of the book level students should master prior to entering first grade should be finalized. After determining the requisite reading level for entering the first grade, the leadership team should then include it in the Kindergarten Reading Vision Plan for teachers' reference.

Communicate Literacy Expectations to the Kindergarten Teachers during Pre-Service Meetings at the Start of the School Year. Prior to the students' first day of the 2019-2020 school year, I recommend a meeting with the kindergarten teachers of PCPS, the elementary principals of PCPS, literacy coaches, and Director of Elementary

Education for PCPS, to discuss the Kindergarten Reading Vision Plan. This allows the teachers to ask questions directly of the Leadership Team and understand the rationale and procedures for kindergarten literacy instruction. In addition, the kindergarten teachers will know the expectations of them for students' literacy instruction and that they will be held accountable for providing specific instruction to meet students' needs by their building principals. By meeting before the start of the school year, teachers' perceptions will be altered to the reality of the leadership expectations of kindergarten readers prior to the first day of school.

Implications

In the preceding section, I offered recommendations to the Director of Elementary Education for PCPS regarding the kindergarten teachers' literacy data-use practices in PCPS, specifically BRPES. In that way, I attempted to address the grant specific "micro" problem of practice. However, as I discussed in Chapter 1, a broader, more "macro" level of practice acted as the driving force behind the research project: first due to accountability pressures for student performance and second, more of an academic focus has been shifted in public schools to the primary grades such as kindergarten to support continuous school improvement (D'Agostino & Rodgers, 2017), specifically in literacy instruction, as it is essential for learning in all other content areas (Clay, 2013).

When teachers build their pedagogical data literacy, data are no longer used by policy makers just to hold teachers and schools accountable for students' performance. Rather, data are used to stimulate and inform continuous improvement, allowing teachers the opportunity to examine multiple sources of assessment data and align appropriate instructional strategies with the needs of individual students. Pedagogical data literacy

skills are important to hone as data-driven decision making implies teachers have specific skills to turn data into information in order to design future instructional sequences. But that means teachers must have the opportunities to refine those skills and collaborate with their colleagues to ensure they are inferring the correct information about student performance and thus making good instructional decisions based on those inferences. Therefore, continuous professional development on how to notice, interpret, and construct future learning experiences for students is a must in order for teachers to improve their pedagogical data literacy skills.

It is also important to remember that the organizational and political context of a school does affect teachers' data-use practices. If teachers perceive that their leaders have specific expectations from their data analyses, then they are influenced in their decision making. The structures for teachers to interact around a specific set of data, availability of assessment data, and the norms of interacting with data are all set by the leadership of the school or division. Therefore, building and district leaders should clearly articulate their expectations are of the teachers when analyzing data in order for them to extrapolate information about their students' learning.

Of course, this Capstone cannot answer the overall broader question but, perhaps, can contribute to the overall conversation of teachers' data-use practices. Notably, this Capstone was designed to focus on a narrow context in mind: examining five kindergarten teachers' data-use practices for one school year in the context of literacy instruction. Moreover, it was designed to be a part of a larger research grant with four school divisions and eight sites. Also, the RT focused on data-use practices in regards to literacy instruction. But this project does provide how the district is making progress in

kindergarten teachers' understanding of how to make data-driven decisions in the realms of student literacy. When interviewing, Ms. Kellie Woodard, she noted,

> "So, as we move and progress – but a few years ago when I came in, we had been doing PALS-K for only a couple of years. Our teachers were still figuring out what does this mean? Our teachers were really figuring out still and processing through the meaning of these are the skills we need to teach, and then we're teaching application of it. Especially for our emergent readers and our beginning readers. So while we're still learning, this conversation really helps me see the progress we've made in the last few years and how far we've come although we are not there yet but the teachers are trying" (Follow-Up Interview, February 15, 2019).

Also, this Capstone does contribute to the overall idea teachers building their pedagogical data literacy, something that even Mandinach (2012) describes as "taking teachers' skill sets to a whole new level in understanding their students' progress toward a specific learning goal" (p. 81). These skills include knowing how to efficiently identify, collect, analyze, summarize, and most importantly, prioritize data (Mandinach et al., 2008) in order to identify problems, develop hypotheses, interpret the data and determine, plan, implement and monitor instructional courses of action (Mandinach & Gummer, 2013). The decisions that teachers use data to inform are multiple and quite diverse, therefore, having sound pedagogical data literacy skills are pertinent to making informed conclusions regarding student learning. The broader research study by the University of Virginia's Curry School of Education and Human Development RT, does contribute to the conversation of how teachers acquire, develop, and perfect their pedagogical data literacy skills. And to understand this further, when talking to Ms. Kellie Woodard, she explains,

> "To say 'Hey, what are we noticing?' or 'Hey, what are we doing?' is huge! They have gotten so much better as we've moved through the past couple of years of saying hey what do we really notice about our students and their data? Why do

> we think that is? What should we do? Now that we have found many teachers don't say like they used to 'I don't know.' You know, this new pedagogy comes back and we've become thinkers. And sometimes it's a very little change in instruction that makes a very big change in learning. That's what we're trying to do. But it takes time, practice, and opportunities for teachers to mess up and then get help. They've gotten better with that and we've gotten better at coaching them." (Follow-Up Interview, February 15, 2019)

Limitations

Although I attempted to convey and address potential threats to my capstone project's trustworthiness through a sound research design, limitations remained. First of all, because I did not collect all of the data myself, I was unable to personally experience the data, meaning, I did not have first-hand knowledge of things that may have happened in the classrooms because they were not recorded in the data corpus. And because the greater research project was not designed with my specific capstone project in mind, data were collected that may not have been necessary for my project. As a result, I may have made certain assumptions about the data, like I did when I first analyzed the teachers' lesson plans after administering the PALS-K data, and erroneously say something did not happen when in fact, it was not part of the research study expectations of teachers. This happened to me twice during my Phase I of data analysis, but my committee chair was able to catch those mistakes and guide me out of those false "rabbit holes." However, if I did not have the committee chair that I did, I could have made some egregious mistakes in my data analysis, thus, affected the recommendations for my study and the implications on the broader problem of practice.

Second, because the teachers knew they were part of the greater research study, they were uncomfortable sharing their knowledge of literacy data due to their limited knowledge of understanding how a student learns to read. During the observations and

interviews, teachers worried whether or not their answers to the RT's questions were "right." In fact, one kindergarten teacher asked a member of the RT during TAP#1,

RT Interviewer:	"Well, okay. I think I've covered the waterfront. Thank you so much."
Ms. Vaughnway:	"Okay. Now tell me what I didn't answer correctly!"
RT Interviewer:	"It's funny because your principal asked the same question. There is no right answer!" (TAP#1 Interview, October 20, 2014)

Ms. Woodard was incredibly supportive in allowing me to conduct a follow-up interview and even extended an offer for me to contact her again for more information, but may have done so because she knew my capstone project was part of the research study she was initially involved.

Next, the fact that I did not conduct my follow-up interview with Ms. Woodard until February 15, 2019, nearly four years after the conclusion of the greater research project, is a limitation to my study. With such a vast passage of time, Ms. Woodard could have developed a holistic perspective of the project with specific details of it being lost. Although she was very forthcoming in her answers to my interview questions, she could have forgotten specific details of the study because so much time had lapsed.

Finally, a limitation in my study could be the Coburn and Turner (2011) conceptual framework I used for analyzing my data. While I used it exclusively to analyze my data, and in the order of the steps they suggest are teachers' data-use processes, I found that the teachers in my study did not follow their pattern. Coburn and Turner (2011) described the process for teachers' data use began with noticing, then moving to interpretations, and finally constructing implications. But in my study, every teacher in both TAP#1 and TAP#3 followed the pattern of noticing, constructing implications, and then interpreting their data. Perhaps this is just a nuance of teachers in

my study but I used this conceptual framework wholly. Maybe the framework should have been altered to meet the needs of the teachers for my study or maybe not. But it does leave me to wonder whether or not this conceptual framework was a factor for the way I created the patterns for my findings.

Reflection

Understanding the process by which teachers make meaning of their assessment data to inform instructional decisions is the whole reason I embarked on this capstone project. My experience as an elementary principal and the expectation I had for my teachers to use their data to make future instructional plans was the premise for my problem of practice. As I stated in Chapter 1, I would email my teachers after the administration of interim benchmark assessments to schedule a data meeting. In my email I would state for teachers to review their data and come to the meeting "prepared to discuss" the instructional changes that needed to occur to move the students forward. However, my teachers had great difficulty in our meetings and at first, I thought it was because they came to them unprepared. But, after experiencing this phenomenon in different schools, I soon realized I did not understand how teachers made meaning of their interim assessment data.

Taking my literature review, findings, recommendations, and implications, I now know through this project that teachers have to be guided through their meaning making of their assessment data. Taking data and turning them into usable information for future instruction is not an easy task. It requires the teacher to fully understand what each of the data mean, how over a period of time can show a trend, and provide information about the strengths and weaknesses of a student in their learning progression. In my

experience, teachers I have worked with have analyzed data on a superficial level, meaning, they calculated the number of passes and failures and if there were more passes than failures, then the onus was on the failing students to acquire missed skills at a different time. However, by examining the teachers in my capstone project, I was able to look from the outside, without any assumptions of skill, and determine what PD the teachers needed in order to hone their pedagogical data literacy skills. I now will have this frame of reference when working with my own teachers and ultimately, be able to understand where they are in the journey of making data-based decisions to better design instruction for their students. And through that lens, I will be able to match my PD to the skill level of my teachers. In essence, I will use data-base decision making of what I notice and interpret to construct the learning experiences to match the skill need for my teachers.

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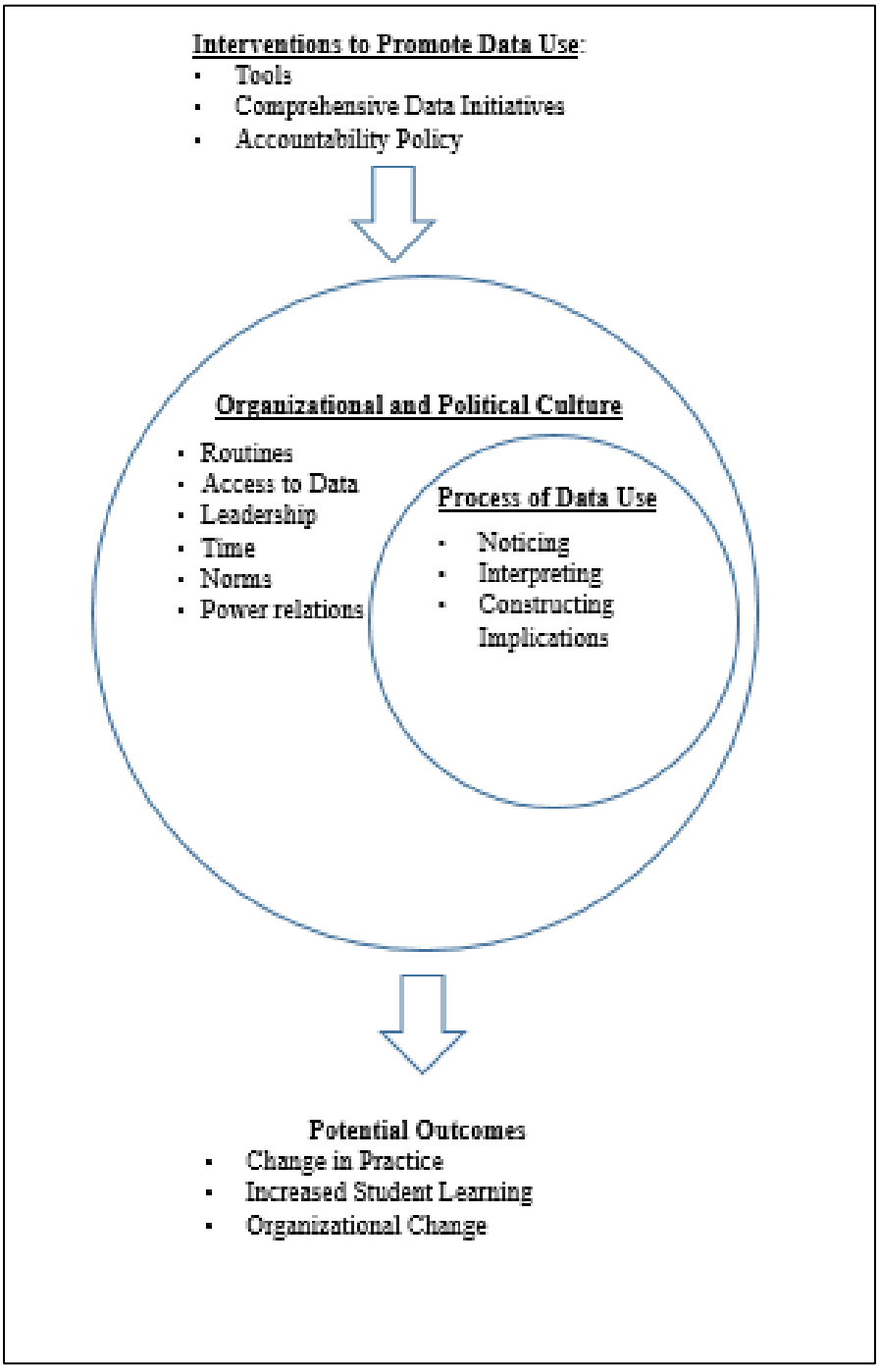
Appendix A

Coburn and Turner's (2011) Conceptual Framework for Teachers' Data Use



Appendix B

Final Follow-Up Interview Protocol

Thank you for agreeing to participate in this follow-up interview regarding the Spencer Foundation research project by the team at the Curry School of Education and Human Development. Let me remind you that this interview is entirely voluntary. Do I still have your permission to proceed?

I know that a fair amount of time as elapsed since the research-team was on site, but now that we have had some time to go through our data and reflect, we wanted to get some additional information to try to make sense of teachers' processes of literacy data use within your district. No matter what I ask, remember, there is no right or wrong answer. I just want y our input and impressions.

First and foremost, do I have your permission to audio-record this conversation? [Thank you. This will make it easier for me to capture your responses, and the recording will be destroyed once it is transcribed. –or – No problem, I am happy to make notes of your responses.]

Organizational and Overall Data-Use Culture, Generally

Although the focus of my questions today will be about making sense of literacy assessment data to inform instruction, I want to start a bit more broadly with the organizational and data culture of the school…

Note-to-Self: Questions around the conceptual framework for project. Start generally and narrow focus.

Tell me about the data routines that are in place in terms of collecting, analyzing, and interpreting literacy data…

Possible follow-up probes:

- Grade-level meetings/formal data meetings/school improvement meetings
- Literacy assessment data sources…state/district/school/teacher
- Who attends these meetings…is it just teachers or are reading specialists, coaches, etc., invited as well?
- Discussion probes for data conversations…
- Required for evaluations –OR- just an expectation for the way the teachers do business (in other words, are they compliant because they have to be or are they committed because they know analyzing data is part of good instruction)

What are the district-mandated literacy assessments for kindergarten teachers?

How do teachers access their literacy assessment data?

Possible follow-up probes:

- What role does the central office play in accessing literacy assessment data for teachers?
- Do reading specialists help kindergarten teachers access their data?
- Do kindergarten teachers collect their own assessment data or do specialists within the building collect assessment data as well and are they considered during data meetings?

What role does the principal play in the data meetings?

How much time is allocated for data meetings?

Are there any district mandates for how many instructional groups each kindergarten teacher is supposed to have or materials they must use to provide enrichment or intervention?

NOTE to SELF: I am looking for time allocated specifically for teachers to discuss literacy assessment data NOT a specified amount of time.

Are there norms for the meetings such as discussion protocols?

Possible follow-up probes:

- Are teachers required to prepare for the data meetings in some way before attending?
- What are teachers required to bring to the meetings? Is there an expectation of
- Is there a formal analysis protocol required of teachers before they attend the meetings?
- What is the general outcome for the meetings? Intervention/enrichment plans…literacy group adjustments…new resource development

Processes of Data Use for School

As I mentioned earlier, the focus of my interview today is about the processes teachers use in your schools to analyze their literacy assessment data to inform their instruction. I want to focus a bit on the specific process teachers use to turn their data into information about their student literacy development.

How would you describe your confidence in terms of teachers having an understanding of how to use data to inform instruction?

And a slightly different question…

How would you describe your confidence in your teachers' ability to make meaning of assessment data to inform them of their students' progress toward literacy goals?

How would you describe your confidence in your teachers' ability to notice trends in assessment data in terms of overall student performance as well as student subgroups performance?

How would you describe your confidence in your teachers' ability to wonder about why students performed the way they did on a particular set of data?

How confident are you that kindergarten teachers are able to dig into their assessment data to really explore what is happening with student learning and identifying gaps?

Do you feel that teachers' understand how to triangulate their assessment data to determine instructional needs of students?

Or Reword if Needed
Do you feel that teachers can make a connection between their PALS-K interim assessment data, monthly running records data, and weekly quick-check data to determine if students are closing their instructional gaps?

Responding to What Has Been Learned by Analyzing Literacy Data

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After teachers spend time sifting through their assessment data to paint a clearer picture of what is happening with student learning, then what happens?

Do teachers create SMART goals of some sort or targeted learning goals for each student, whether in need of enrichment or intervention?

Do you find that teachers focus on providing growth learning experiences for the lowest-performing student to the highest-performing student, or do you find that they focus primarily on the lowest-performers?

What type of learning plans do teachers create as a result of their data analysis of literacy assessments?

How do teachers implement their action plans? Is there a specific timeframe for determining whether or not the instructional modifications are working?

Probes (will be used as needed)

Please tell me more about that.
Can you give me an example?
Why do you say that?
Could you expand on that a little more?
What do you mean by that?
What would that look like?
It sounds like you are saying, "…" Is that a fair summary?

Appendix C

Descriptive Code Book

A PRIORI CODES (to be applied to Lesson Plans, Observation Field Notes, Interview Transcripts, and Think-Aloud Protocols)

Component	Code	Description
Process of Data Use	***Noticing***	• Teachers' observations of the data they brought to the think-aloud meetings.
	Interpretation	• Teachers' meaning-making of their data during the think-aloud meetings, observations, and interviews.
	Constructing Implications	• Teachers' reaction to their data in terms of changes in practice to support students' instructional needs as noted in lesson plans.
Organizational and Political Context	***Data Routine***	• Structures for teachers to interact around a specific set of data.
	Access to Data	• Availability of assessment data for teachers to access for collection, storage, and retrieval.
	Leadership	• Leadership influences of allocating time, fostering norms of interaction, and participating in data-use routines.

EMERGENT CODES (After using the *a priori* codes to go through the TAP #1, TAP#2, Lesson Plans, and Classroom Observations these emergent codes were generated.)

Code	Description
"Attention Disorders"	• Kindergarten teachers at Blue Ridge Parkway Elementary used the term *attention disorders* to describe students who portrayed inattentiveness during reading instruction.
Best "Fit" Within Each Group	• *Best "Fit" Within Each Group* refers to BRPES' practice of assigning students to either the top-, middle-, or low-instructional group for reading instruction based on an

	assessment. Students in each of these groups "fit" a particular instructional profile created by the kindergarten teachers. At BRPES, they used this term to describe students who were placed in the top- or low-instructional group but really needed another reading instructional group designed to meet their instructional needs.
"Other Factors"	• *"Other factors"* refer to the kindergarten teachers at BRPES and their beliefs of why students perform well in the top-instructional group or do not perform well in the low-instructional group. These include anything with what they believe interfered with the student's ability to read including EL, SPED, behavior, attention issues, lack of parental support at home, no homework, and child study candidates OR what advanced their ability to read such as self-motivation, good parental support at home, "bright" description of intelligence, or "willingness to please" work ethic.
"Outliers"	• Kindergarten teachers at BRPES used the term *"outliers"* to describe students that were either beyond the top-instructional reading group or below the low-instructional reading group and needed to be in an instructional reading group on their own. However, due to the perceived mandate by the BRPES administration of only having three instructional reading groups, students were instructed in the group that they most "fit."
7-10 range	• The *7-10 range* refers to the word identification sub score on the

	PALS Concept of Word (COW) category score. This is sometimes called *firm* COW.
Alphabet Recognition	• *Alphabet Recognition* refers to students' ability to correctly identify upper- and lower-case letters.
Beginning Reader Plan	• PALS provides resources for students' Instructional Oral Reading level for beginner, transitional, intermediate, and advanced readers. The Beginning Reader Plan is the first level of lesson plans PALS provides teachers.
Behavior	• Term teachers used to describe students' inability to tend to the task at hand. Teachers described *behavior* as anything other than attention that kept students from performing tasks. Attention was in a category all on its own.
Concept of Word (COW)	• *Concept of Word* refers to a students' ability to match spoken words with written words while reading. Students with a firm concept of word understand that each word is separate and that words have spaces between them in a sentence.
Criteria for Creating	• *Criteria for Creating* refers to the principles teachers would use when deciding which instructional reading groups students would be divided into for future reading instruction.
Firm	• A *firm* Concept of Word means the student accurately has speech to text pointing while reading aloud a memorized text.
Frustrational Reading Level	• *Frustrational Reading Level* is described by BRPES kindergarten teachers as the reading level where

	a student has difficulty reading the text and has less than 90% accuracy when decoding the words. Kindergarten teachers reported they are mandated by leadership to find the students' frustrational reading level at the end of the year.
Good Parental Support	• *Good Parental Support* is a term teachers used to describe parents' promotion of intellectual development in their kindergarten students.
Highest to Lowest	• *Highest to Lowest* refers to the way the Kindergarten teachers sorted – from the highest scores to the lowest scores – their students on the PALS assessment reports.
Independent Reading Level	• *Independent Reading Level* is described by BRPES kindergarten teachers as the reading level that is relatively easy for a student to read and has at least 95% accuracy when decoding words. Kindergarten teachers reported they are mandated by leadership to find the students' independent reading level at the end of the year.
Instructional Reading Groups	• Kindergarten teachers at Blue Ridge Parkway Elementary School used the philosophy of *instructional reading groups* to place students in three small groups based on their instructional needs.
Instructional Reading Level	• *Instructional Reading Level* is described by BRPES kindergarten teachers as the reading level that is challenging for a reader, with at least 90% accuracy rate, but manageable. According to BRPES teachers, a student's *instructional reading level* is considered to be his/her reading level for reading instruction. Kindergarten teachers

	reported they are mandated by leadership to find the students' instructional reading level at the beginning, middle, and end of the school year.
Lack of "Good" Parenting	• *Lack of "Good" Parenting* is a term Blue Ridge Parkway Elementary School kindergarten teachers used to describe parents' who were uninvolved in their kindergarten students' education. This also refers to parents' lack of responsiveness to student needs.
Lack of Progress	• *Lack of Progress* refers to stagnation or no advanced development in a student's reading ability.
Language	• *Language* refers to a student's ability to understand and communicate their needs and wants.
Less than 4	• *Less than 4* refers to the word identification sub score on the PALS Concept of Word (COW) category score. This is also called *developing* COW.
Less than 6	• *Less than 6* refers to the word identification sub score on the PALS Concept of Word (COW) category score. This is sometimes called *rudimentary* COW.
Letter-Sound Knowledge	• *Letter-sound knowledge* is knowledge of letters or groups of letters which represent individual speech sounds in language.
Level-B Books	• *Level B Books* are for very beginning readers. They usually have just one or two simple sentences, spread across two lines, and have illustrations that match very closely to the print.

Level-C Books	• *Level C Books* are usually simple stories that have between two and six lines of text. The words in the story are simple and are usually either one or two syllables. The illustrations match very closely to the print.
Level-D Books	• *Level-D Books* are more complex stories than Level-C books that contain two to six lines of text on each page. Four out of five Kindergarten teachers at BRPES stated that a student has mastered Kindergarten expectations and is ready for first grade if he/she is reading Level-D books at the end of the year. One Kindergarten teacher at BRPES stated students needed to be beyond Level-D Books to be ready for first grade.
Level-E Books	• *Level-E Books* are characterized as being more informational text with sequential information. They have longer sentences, typically 10-words or more. In addition, they are considered to be on the "first-grade" reading level. Two Kindergarten teachers at BRPES said her middle-instructional reading group was using Level-E books in TAP#3
Level-F Books	• *Level-F Books* are considered more complex than Level-E books as they contain three to eight lines of text per page, compound sentences with the conjunction "and," and have longer sentences with 10 words or more. In addition, they are considered to be on the "first-grade" reading level. One Kindergarten teacher at BRPES said her middle-instructional reading group was using Level-F books in TAP#3, while two

	kindergarten teachers stated their top-instructional group was using Level-F books in TAP#3.
Level-G Books	• *Level-G Books* refers to books written in unusual formats for emergent readers to include questions followed by answers, longer texts with repeating longer and more complex patterns, and slightly smaller print. In addition, they are considered to be on the first-grade reading level. Two Kindergarten teachers at BRPES stated their top-instructional group was reading Level-G Books in TAP#3.
Little Movement	• *Little movement* refers to the teachers' description of the static nature of the configuration of the group members after the PALS Fall administration.
Low Instructional Group	• Kindergarten teachers at Blue Ridge Parkway Elementary used the term *low instructional group* to describe the students who had the lowest results on the word identification sub score on the PALS Concept of Word (COW) category score. Students in this group focused on poems to help them master COW and continued to work on alphabet recognition and letter-sound knowledge.
Management	• *Management* refers to the process teachers use to establish and maintain an organized and orderly classroom environment.
Middle Instructional Group	• Kindergarten teachers at Blue Ridge Parkway Elementary used the term *middle instructional group* to describe the students who had medial results on the word identification sub score on the

	PALS Concept of Word (COW) category score. Students in this group were placed in Level B books.
Motivation	• *Motivation* refers to a student's overall willingness or desire to complete a task.
Observation	• Kindergarten teachers at Blue Ridge Parkway Elementary used *observation* by recording a student's reading behaviors of pointing, letter recognition, and sound recognition while reading a piece of text.
Other Data	• Teachers at Blue Ridge Parkway Elementary used *other data* than PALS when determining students' instructional group for reading when they distrusted the PALS results.
PALS-K Results	• *PALS-K Results* refers to the Phonological Awareness Literacy Screening for Kindergarten to measure a student's knowledge of several important literacy fundamentals: phonological awareness, alphabet recognition, concept of word, knowledge of letter sounds, and spelling. Kindergarten teachers administer the PALS-K three times a year: Fall, Mid-Year, and Spring, to determine students' literacy needs so literacy instruction can be matched in small reading groups. Kindergarten teachers at BRPES administer the PALS-K three times a year and use those data to create their instructional reading groups: top-, middle-, and low-instructional group.
Poems	• *Poems* are used to teach COW due to rhyming words. Students can

	learn about phonics and letter sounds when listening for and locating rhyming words.
Poor Self Confidence	• *Poor Self Confidence* is a term kindergarten teachers at Blue Ridge Parkway Elementary use to describe a student who does not feel competent during reading instruction. A student with *poor self-confidence* may need verbal praise and cues in order to move forward in a reading lesson.
Preschool	• *Preschool* refers to an educational program students attend before attending kindergarten in elementary school.
Quick Checks	• *Quick Checks* are brief measures used to monitor progress of a specific literacy skill. They are designed to be administered up to every two weeks in order to know whether instruction is working or needs to be adjusted.
Red-Highlighted Areas	• *Red-Highlighted Areas* refers to the red box over specific literacy tasks on the PALS-K Summary Report indicating the student was below the predetermined Individual Task benchmark for that specific literacy task.
Running Records	• Kindergarten teachers at Blue Ridge Parkway Elementary use *Running Records* to determine a student's instructional reading level. Students read a leveled passage and teachers record the reading behaviors on a chart.
Special Education Services	• The *Individuals with Disabilities Education Act (IDEA)* outlines the types of *Special Education Services* identified students with disabilities receive.

Speech	• *Speech* refers to a student's ability to express thoughts and feelings by articulating sounds.
Top-Instructional Group	• Kindergarten teachers at Blue Ridge Parkway Elementary used the term *top instructional group* to describe the students who had firm results on the word identification sub score on the PALS Concept of Word (COW) category score. Students in this group were placed in Level C books.
Tracking Practice	• *Tracking Practice* refers to the activities that help students process letters from left to right as they learn to read fluently.
Trust	• *Trust* refers to the kindergarten teachers' confidence in the reliability of assessment data.
Words in Isolation	• *Words in Isolation* refers to students' automaticity in recognizing words from a list. Students do not decode these words.
Word-Study Progression	• *Word-Study Progression* refers to an approach to spelling instruction that moves away from memorization and focuses on word features. Kindergarten teachers at BRPES use word-study instruction in their instructional reading groups. One Kindergarten teacher stated that they were all given different forms of the word-study progression for Kindergarten which was confusing and no one knew which word-study features matched the reading levels. Therefore, they were all teaching different features.
Writing Words	• *Writing Words* refers to the process where students use their letter-

	sound knowledge to write letters to form words.

Appendix D

Think-Aloud-Protocol #1

The Kindergarten teachers were asked to bring their Fall PALS-K data to the interview. The RT used this semi-structured protocol to conduct the TAP#1 in October 2014:

Directions for Verbal Protocol #1:

Today, we are interested in hearing about how you made sense of the literacy data you have on your students. One way we can do this is to have you think aloud while we listen and take notes. We will also be recording this in order to accurately capture your thinking. During the think aloud, we may ask you a few targeted questions to clarify. Let's start by looking at your PALS data. Let's pull up your class summary sheet and begin by having you talk me through how you would make sense of your data.

Additional Prompts:

Getting Started	
What is the first think you notice about these data? *Example: Usually I pull up the Class Summary report from my PALS account.*	
What will you look at next? *Example: I see which students are making benchmark and which students are still in need of additional support. And in what area they are still needing that support and in what area they need to be pushed.*	
FAMILIAR	**UNFAMILIAR**
Can you talk me through how you would use _____? *Example: I use the Class Summary report to create groups for small-group time. I group students who have similar levels for COW, rhyming ability, and number of letter sounds.*	You're sitting down to plan instruction, what kind of reports do you use? *Example: I use the Class Summary report, Student Summary report, and Student Score History report.*
GENERAL	**TARGETED**
All in all, what do these data say to you?	Class Summary report
What might be your next steps now that you have these data?	What do these data say to you? *Example: I have a wide range of abilities between my class of 15 students.*

Appendix E
Think-Aloud-Protocol #3

The Kindergarten teachers were asked to bring data and an example of a high, medium, and low reader to the interview. The RT used this semi-structured protocol to conduct the TAP#3 in May 2015:

For our last think aloud, we would like for teachers to choose three students to discuss.

- *One student who is performing right at grade-level expectations;*
- *One who is performing above expectations but the teacher may be wondering if there was more that she could have done for the student's learning; and*
- *One student who is performing below grade-level expectations (but still not the lowest performer and is not a candidate for child study) and did not make as much progress as expected.*

We would like for you (the teacher) to walk through a conversation you might have about these students as they hand them off to the first grade teachers. We ask that you bring whatever evidence or artifacts you may need to help them during such a conversation.

1. What evidence and artifacts did you bring? Why did you chose these?

2. Please share an example of a high reader and the data you had to support the instructional decisions you made.

3. Please share an example of a medium reader and the data you had to support the instructional decisions you made.

4. Please share an example of a low reader and the data you had to support the instructional decisions you made.

5. Thinking about all the evidence you do have, is there anything that you wish you had that you didn't?

6. What information would you share about each of your high, medium, and low students to the first grade teachers?

Appendix F

RT Protocol for Classroom Observations

The RT used this classroom observation protocol for the first few months of the study. In December 2014, the RT determined this protocol was too cumbersome for them to continue to use. As a result, it was discontinued after December 2014 and a running-record format was utilized instead. The change from this protocol to the running record led to a richer description of the happenings in the classroom.

General Information

Researcher name:
School:
Teacher:
Month/day/year:
Time (beginning and ending):
Summary of Observation *(1 short paragraph, to be filled in after observation, summarizing key events):*

Reading Processes: *(check if there is evidence of these moments in your fieldnotes)*

1) Whole Group
   ☐Pre-Reading ☐During Reading ☐Post Reading ☐Skill and strategy instruction

2) Small Group
   ☐Pre-Reading ☐During Reading ☐Post Reading ☐Skill and strategy instruction

3) Centers ☐

4) One-on-one ☐

5) Formal assessment☐

Initial Observations (complete in first 2-3 minutes):

Classroom Environment:

- *Total students present:*
- *Total adults present:*
- *Description of physical environment:*
    - *Classroom layout:*
    - *Books and learning materials:*
    - *Materials or work displayed:*
    - *Accommodations:*

- *Overall classroom climate:*

Detailed Class Session Observation (approx. 30 minutes)

Running Record (highly detailed account of the observation):

Things to consider:		
Whole Group	**Small Group/One-on-one**	**Centers**
Building background knowledge	Building background knowledge	Skills and strategy practice
Read aloud	Students engaged with text	
Text used (e.g., nursery rhymes, poems, book)	Text used (e.g., nursery rhymes, poems, book)	
Songs	Sorts (concept, letters, sounds, words)	
Skills or strategy model/practice	Skills or strategy model/practice	
Questioning Strategies (throughout)	Writing	
Vocabulary Development (throughout)		
Writing		

Reader Information		
Emergent	**Beginner**	**Reader**
accurate finger pointing or voice pointing	finger pointing	May not be present
coordinating beginning sounds with picture clues or memory	coordinating beginning sounds with picture clues	fix up strategies for making sense
practice matching speech to print	practice matching speech to print	use analogy to other known words
building accuracy & fluency	building accuracy & fluency	build fluency & expression

beginning sounds picture clues letter identification and formation	beginning sounds, beginning consonant blends and digraphs, short vowel families	long vowel patters and others patterns, break words down by removing affixes
rhyming patterns	rhyming patterns	
	Rereading	plot structures, nonfiction text structures

Running Record:

Post-Observation Reflection

(Researcher's thoughts about the observation, to be completed within 24 hours of observation):

- Speculations on analysis: what are you learning, seeing?
- Are any methods problems arising?
- Were there any conflicts or ethical dilemmas? How did you handle them?
- What was your own frame of mind during the observation? (attitudes, opinions, etc.)
- Clarification: what needs to be followed up on or checked later?

Appendix G

Teachers' Lesson Plan Template

Week:	Teacher:	Group:

Beginning Reader Lesson Plan

Monday	Tuesday	Wednesday	Thursday	Friday
Fluency/Rereading **Title:** **Practice for Fluency** **RR:** **Word Bank** Focus Words: Activity in Text: Activity out of Text:	**Fluency/Rereading** **Title:** **Practice for Fluency** **RR:** **Word Bank** Focus Words: Activity in Text: Activity out of Text:	**Fluency/Rereading** **Title:** **Practice for Fluency** **RR:** **Word Bank** Focus Words: Activity in Text: Activity out of Text:	**Fluency/Rereading** **Title:** **Practice for Fluency** **RR:** **Word Bank** Focus Words: Activity in Text: Activity out of Text:	**Fluency/Rereading** **Title:** **Practice for Fluency** **RR:** **Word Bank** Focus Words: Activity in Text: Activity out of Text:
New Book Title: **Level:** **Preview Book:**	**New Book Title:** **Level:** **Preview Book:**	**New Book Title:** **Level:** **Preview Book:**	**New Book Title:** **Level:** **Preview Book:**	**New Book Title:** **Level:** **Preview Book:**

Listen & Support Reading	**Listen & Support Reading**	**Listen & Support Reading**	**Listen & Support Reading**	**Listen & Support Reading**
Review & Revisit	**Review & Revisit**	**Review & Revisit**	**Review & Revisit**	**Review & Revisit**
Writing for Sounds **Target Feature:** **Choose Sentence:** **Guide Writing:**	**Writing for Sounds** **Target Feature:** **Choose Sentence:** **Guide Writing:**	**Writing for Sounds** **Target Feature:** **Choose Sentence:** **Guide Writing:**	**Writing for Sounds** **Target Feature:** **Choose Sentence:** **Guide Writing:**	**Writing for Sounds** **Target Feature:** **Choose Sentence:** **Guide Writing:**
Word Study **Choose Features:** **Demonstrate Teacher Directed Sort** **Sort & Check**	**Word Study** **Choose Features:** **Demonstrate Teacher Directed Sort** **Sort & Check**	**Word Study** **Choose Features:** **Demonstrate Teacher Directed Sort** **Sort & Check**	**Word Study** **Choose Features:** **Demonstrate Teacher Directed Sort** **Sort & Check**	**Word Study** **Choose Features:** **Demonstrate Teacher Directed Sort** **Sort & Check**

Appendix H

Analytic Codebook

Code	Description
Findings in the Form of Patterns	
Noticed PALS-K data to make 3 instructional reading groups	Teachers first noticed their data Teachers sorted students into 3 instructional reading groups: top, middle, and low
Constructed Implications for each reading group	Teachers made instructional plans for each group after noticing them
Interpreted why students performed the way they did	Teachers then interpreted why students performed the way they did either by factors beyond their control (low/high) or within their control (middle)
Lesson Plans in September same for all 3 instructional groups and across grade level	Lesson plans were not differentiated according to instructional group in September 2014. Both classrooms had the same instructional sequences for all 3 groups.
Lesson plans in October same for all 3 instructional groups and across grade level	Lesson plans were not differentiated according to instructional group in October 2014. Both classrooms had the same instructional sequences for all 3 groups.
Lesson plans in December were different for all 3 groups	Lesson plans were differentiated according to instructional group in December 2014.
Perceived instructional mandate of only 3 instructional reading groups	Teachers' perceptions influenced their decision-making in sorting their students into 3 instructional reading groups regardless of students' needs
Confusion of leadership expectation of preparedness of first grade	Teachers confusion about leadership's expectations of kindergarten students preparedness for first grade by the required book-level
Recommendations	
Development of teachers' pedagogical data literacy skills	Develop teachers' understanding of the PALS-K, quick checks, and formal running records to understand the purposes of assessments and the data derived from administering them
Expectation of planning differentiated instruction for leveled-reading groups	Require teachers to plan instruction weekly with the literacy coaches and use their quick checks and formal running

	records to adjust groupings if necessary. The focus of these meetings is to plan appropriate instructional activities for each leveled-reading group.
Creation of kindergarten reading vision and communicate expectations prior to the first day of school	Leadership Team to work on plan over summer and then meet with teachers at the beginning of the school year to clearly articulate vision for the number of reading groups, management of those groups, and expectations of reading levels by the end of the kindergarten year.

Appendix I

First Page of My "To-Do" List

	Task/Concern	Projected Due Date	Actual Date Completed/Resolution/Notes
1.	Add note for reader that there were ~~four~~ actually there were five different people who collected data after analyzing each observation document. Be specific such as, "Data collector 3 provided a thick description," or "Data collector 1 provided a less thick description."	**12/8/18**	**I created a matrix of each of the observation cycles and notes about the information provided by the observers. I wrote an analytical memo to myself on December 9, 2018, describing my observations. See Analytic Memo #1.**
2.	Include a matrix that contains the number of pieces of data for each teacher. So a matrix example such as: Teacher 1 Teacher 2 Observation 2 1 TAPS 3 2 Documents 2 1	**12/1/2018**	**Although I have a matrix, I need to find the third TAP for each teacher. The transcriptions say on the third TAP something like, "Welcome to the 3rd and final TAP for the year." But all I see for each teacher is 2 TAP exercises. Will ask my committee chair about this.**
3.	In the trustworthiness section, add a paragraph or two regarding my biases and assumptions. Also answer, "What is my stance with data analysis?"	**12/1/2018**	
4.	Add a section to the methods answering, "Why am I going to follow up with a district administrator?"	**1/5/19**	
5.	Organize other artifacts from the District such as: • Artifacts from the division (wait...use the term "district"); • Grade-level meeting minutes; • Final School report for BRPES *; and • Initial Interview transcript from administrators, both district and division.	**12-2-18**	**Today, I organized the ancillary artifacts from the District.**

Appendix J

Formal Running Record

Oral Reading in Context: 100 Word Chart

Student *Date*

Passage Title ❑ *expository* ❑ *narrative* *Passage Level*

Directions: Mark words read correctly with a check in each box. Mark errors by leaving the box blank or note the error. Record the number of errors and the total time below. Use the equations below to determine WPM and accuracy.

1. Number of errors: _____ Total Time: _____:_____ WPM:_____
min *sec*

2. Accuracy if 100 word passage: 100 – _____ = _____%
# of words *# of errors* *accuracy*

OR

Accuracy if passage less than 100 words: _____ – _____ = _____ / _____ = _____%
# of words *# of errors* *# of words* *accuracy*

3. WPM: _____ x 60 = _____ + _____ = _____
 # min *60 sec/min* *# sec* *total time in seconds*

AND

WPM: _____ x 60 = _____ / _____ = _____
 # words *60 sec/min* *total time in seconds* *WPM*

UPDATED ON: 2/23/2009

Source: PALS-K, University of Virginia.

Appendix K

PALS-K Teacher Reports and Report Description

PALS-K Teacher Reports and Report Description	
Report Name	**Report Description**
Class Summary	This report lists all of the students in the class and their respective scores on each of the tasks on the PALS-K screening. In addition, there are symbols indicating specific information including:  The Red ID symbol means the student was identified in the most recent testing window. "Identified" means the student scored below the benchmark score and may be at risk of developing a reading difficulty. Individual scores in red are below the benchmark for that task. Moreover, students who have this symbol qualify for additional reading instruction.  Scores highlighted in red indicate they are below the benchmark for that task.
Class Concept of Word Report	This report lists Concept of Word scores for all students in the class.
Class Alphabet and Letter Sound Knowledge	This report provides a list of the entire class and each student's performance on alphabet recognition and letter sound tasks.
Class Performance by Task	This table summarizes the Entry Level results for all of the students in the class for the current testing window. A line separates those who were not identified for additional instruction from those who were identified for additional instruction.

Appendix L

Discussion Data-Analysis Protocol (D-DAP)

Discussion Data-Analysis Protocol (D-DAP)
Blue Ridge Parkway Elementary School

Teacher Name: _____ Grade-Level Meeting Date: _____

PALS-K Administration (Circle One): Fall Mid-Year Spring Year: _____

Section I: Noticing Data
***Note*: Teacher to Complete *Before* Grade-Level Meeting**

1. Complete the Data "Tool Kit" for Instructional Planning for the Respective PALS-K Administration

2. Looking at the Class Summary *holistically*, what are some strengths of the group?

3. Looking at the Class Summary *holistically*, what are some weaknesses of the group?

4. Which students have perfect scores on all three components of COW (pointing, Word ID in Context, and COW Word List)?
   _____ _____ _____

   _____ _____ _____

5. How many students in your class have perfect scores on all three components of COW?
   _____/_____ = _____%

6. Which students have the red ID symbol that indicates they are below the summed score benchmark?
   _____ _____ _____

_____ _____ _____

7. How many students in your class are below the summed score benchmark? _____/_____ = _____%

8. Which students have scores below the benchmark for individual tasks? List students and task.

_____ _____ _____

_____ _____ _____

_____ _____ _____

Section II: Interpreting Data
***Note*: Teacher to Discuss and Record *during* Grade-Level Meeting**

- From the PALS-K data you noticed, share with your colleagues the *holistic* strengths of your class.
- From the PALS-K data you noticed, share with your colleagues the *holistic* weaknesses of your class.

9. After your colleagues share what they noticed about the *holistic* strengths and weaknesses of their classes, describe how they are similar or different from what you noticed in your class.

- From the PALS-K data you noticed, share with your colleagues how many students you had with *perfect* scores on the COW tasks.

10. After your colleagues share their results of students with *perfect* scores on the COW tasks, describe how that is similar or different from what you noticed in your class.

- From the PALS-K data you noticed, share with your colleagues how many students you had with the *red ID* symbol beside their name.

11. After your colleagues share their results of students with *red ID* symbols beside their names, describe how is that similar or different from what you noticed in your class.

- From the PALS-K data you noticed, share with your colleagues the students and the associated tasks with scores below the benchmark.

12. After your colleagues share their results of students and the associated tasks with scores below the benchmark, describe how that is similar or different from what you noticed in your class?

13. After discussing with your colleagues, what factors **in your school's sphere of influence**, may be contributing to your current results? Share with your colleagues. (Consider: curriculum, instruction, environment, literacy group characteristics, time of literacy group, etc.)

Section III: Constructing Implications
Note: **Teacher to Complete *After* Grade-Level Meeting**

Grouping Students for Literacy Instruction
Teachers: Using your Class Summary Report*, sorted by COW pointing scores and the* COW in Text Stage Based on PALS-K Score *chart to sort students into instructional reading groups. In the event there are students between stages, use your most recent* Quick Check *or* Formal Running Record *as evidence of their COW development.*

14. **<u>Top Instructional Group (Firm COW)</u>** – Identify students fell into the "firm" range for pointing, word ID in context, and COW word list

    _____ _____ _____

    _____ _____ _____

15. **<u>Low Instructional Group (Developing COW)</u>** – Identify students who fell into the "developing" range for pointing, word ID in context, and COW word list

    _____ _____ _____

    _____ _____ _____

16. **<u>Middle Instructional Group (Rudimentary COW)</u>** – Identify students who fell into the "rudimentary" range for pointing, word ID in context, and COW word list

    _____ _____ _____

    _____ _____ _____

17. **<u>Identifying Instructional Reading Groups for "between stagers"</u>** - For students who were "between stages" of COW development, use your most recent Quick Check and Formal Running Record data to make a determination of the instructional reading group for each student. List student, instructional reading group assignment, and the data to support your decision.

    _____ _____ _____
    (student) (reading group assignment) (data to support decision)

    _____ _____ _____
    (student) (reading group assignment) (data to support decision)

    _____ _____ _____
    (student) (reading group assignment) (data to support decision)

18. **<u>Identifying the "Outliers" in your class</u>** – For students with either perfect scores on each of the tasks for COW development or lower scores on those tasks than the rest of the students, consider what those students need instructionally in order to advance? Do they need to be in a separate group by themselves in order to receive instruction based on their needs?

19. Based on the data, what instructional skills do your **<u>low instructional group</u>** need to develop in order to advance their reading progress? How will your instruction change based on their skill needs? How will your Quick Checks and Formal Running Records provide evidence to show the students' progress in their skills?

20. Based on the data, what instructional skills do your **<u>middle instructional group</u>** need to develop in order to advance their reading progress? How will your instruction change based on their skill needs? How will your Quick Checks and Formal Running Records provide evidence to show the students' progress in their skills?

21. Based on the data, what instructional skills do your **top instructional group** need to develop in order to advance their reading progress? How will your instruction change based on their skill needs? How will your Quick Checks and Formal Running Records provide evidence to show the students' progress in their skills?

22. Based on the data, what instructional skills do your **"outliers" instructional group** need to develop in order to advance their reading progress? How will your instruction change based on their skill needs? How will your Quick Checks and Formal Running Records provide evidence to show the students' progress in their skills?