EXPLORING HOW INSTRUCTIONAL COACHING INFLUENCED TEACHERS'
PERCEPTIONS OF ASSESSMENT, DATA USE, AND LITERACY PRACTICES: A CASE
STUDY OF AN URBAN ELEMENTARY SCHOOL

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ABSTRACT

Jessica R. Milton: Exploring How Instructional Coaching Influenced Teachers' Perceptions of Assessment, Data Use, and Literacy Practices: A Case Study of an Urban Elementary School
(Under the direction of Rita O'Sullivan)

Low-income urban schools that have chronic student underachievement have championed instructional coaching as an effective education reform strategy. Studies have shown that instructional coaching can be a promising approach for teacher professional development aimed at building educators' capacity to use student data to inform literacy instruction and increase student performance on standardized reading assessments (Bertrand & Marsh, 2015; Huguet, Marsh, & Farrell, 2015; Marsh, McCombs, & Martorell, 2010). The purpose of this qualitative case study was to better understand how teachers in a low-performing urban elementary school serving mostly minority students perceived student assessment, data use, and literacy instruction after participating in an externally funded professional development initiative. Of particular interest was exploring how instructional coaching and a professional learning community (PLC) led by an external literacy consultant influenced teachers' perceptions of collaborative data use and literacy practices implemented in the school. The findings from this study suggest that during the three-year coaching project, teachers perceived an increased focus on using benchmark and progress monitoring assessments to measure student performance and progress with developing reading skills. Additionally, teachers experienced mounting pressure from school leadership to use data to improve student learning outcomes and to conform to a preferred approach to literacy instruction. Although there was increased teacher dialogue about student literacy data within the PLC, data conversations mainly focused on low-

performing students who did not meet reading benchmarks, which resulted in assigning students to reading groups for targeted interventions. Data analysis revealed that teachers perceived student progress toward meeting mid-year and end-of-year literacy goals as being an outcome of the instructional coaching they received and the small-group literacy instruction they implemented in their classrooms.

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"I am because you are." – Ubuntu proverb

Through connection, community, and caring, we can accomplish great things.

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CHAPTER 1. INTRODUCTION

Neoliberal education reform strategies focus on increased student assessment, high-stakes accountability, and regulation of schools, teachers, and students. These reforms have been implemented to improve the quality of schools, particularly urban school systems, by raising standards and accountability policies. Politicians, corporations, and neoliberal intellectuals justify tough accountability measures by pointing to the chronic failure of public schools, particularly their failure to educate children of color (Lipman, 2006). The Bush administration's No Child Left Behind Act (NCLB) of 2001 set in motion a standards-based reform movement that pushed for improved student achievement and teacher effectiveness in American public schools. NCLB was the first federally implemented neoliberal policy that resulted in increased testing and accountability with the intention of reducing racial and socioeconomic achievement gaps. The neoliberal education reform movement has required public school systems to increase the administration of student assessments and implement a system of rewards and sanctions based on student performance. Consequently, neoliberal education reforms require extensive changes to data collection and analysis, testing, staffing, and operations in public schools (Braithwaite, 2016).

This data-focused educational reform emphasized the use of scientifically based research to inform the curriculum and instructional methods teachers employ in the classroom to improve student learning. The broad implementation of standards-based accountability incited by the federal NCLB Act created opportunities and incentives for data use in education by providing schools and districts with not only an abundance of data for analysis but also increased pressure

on schools to improve student tests scores. Implicit in NCLB and other state accountability policies is the belief that data—particularly student test scores—are important sources of information to guide instructional decisions (Marsh, McCombs, & Martorell, 2010). In recent years, interest has risen in data-driven decision making in education. That is to say, researchers and practitioners want to learn how districts, schools, and classrooms can improve through the use of various types of data, especially quantitative assessment data, to inform a range of instructional decisions.

Data-driven decision making[1] has resulted from the advent of technological changes that make data readily accessible to educators, the creation of test-based accountability systems under NCLB, and the increased availability of quantitative data due to accountability reforms (Faria et al., 2012; Marsh, Pane, & Hamilton, 2006). Although the NCLB policy carried an implicit assumption that the availability of data will inform and initiate changes in teaching practice, mechanisms for helping educators turn accountability data into actionable information was lacking in the federal policy (Wayman, 2005).

Policymakers continue to argue that student performance data, specifically assessment data, are important levers that should be used systematically and strategically to increase student achievement and improve teaching. In fact, recent studies that have examined the characteristics of high-performing schools and school districts found that data-driven instruction is a common feature in many of these organizations (Datnow, Park, & Wohlsetter, 2007; Snipes, Doolittle, & Herlihy, 2002). Proponents of effective data use argue that data-driven decision-making practices allow school systems to learn more about their schools, identify successes and challenges, target

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[1] For the purposes of this proposed study, *data-driven decision making* is defined as systematically analyzing and interpreting benchmark or interim assessment data within the school, applying outcomes of analyses to modify teaching, curricula, and school performance, and implementing and evaluating these innovations (Schildkamp & Kuiper, 2010).

areas of improvement, and help evaluate the impact of programs and practices (Mason, 2002). At the classroom level, advocates of data-driven decisions claim it is a learning-centered teaching tool that supports differentiated instruction by providing information that helps teachers tailor instruction to fit class and individual learning needs (Dunn, Airola, Lo, & Garrison, 2013).

Problem Statement

With a burgeoning body of evidence supporting the power of data-driven decision making for district, school, classroom, and student improvement, teachers are expected to successfully use data to change student outcomes, which requires teachers to be technologically, analytically, statistically, and pedagogically astute (Dunn et al., 2013). Mandinach (2012) referred to *pedagogical data literacy* or *instructional decision making* as:

> The ability to transform data to instructional action. It entails combining the pedagogical content knowledge (Shulman, 1986) that teachers bring to an instructional event and their knowledge about how the data can be used to impact classroom practices and instruction to affect change in student learning and performance. (p.73)

However, researchers claim, and the general public has typically agreed, that practitioners in the field of education make decisions based on intuition and instinct rather than evidence (Slavin, 2002, 2003; Ingram, Louis, & Schroeder, 2004). Furthermore, we know that not all educators are equipped to analyze and use data to adapt their planning and instruction (Cosner, 2012; Kerr et al., 2006; Means et al., 2009; Mash, Pane, & Hamilton, 2006; Olah et al., 2010). In many cases, teachers have difficulty bridging the gap between identified problems reflected in student learning data and an appropriate instructional response (Goertz, Olah, & Riggan, 2009). Another set of challenges emerges as teachers work to integrate these new expectations for data use into their practice, making sense of them in relation to their current beliefs and assumptions about student learning, assessments, and literacy practices (Young, 2006).

Recent studies have also shown that many teachers do not know how to use student data properly or do not actively use student data to guide planning and instructional decisions (Cosner, 2012; Earl & Katz, 2006; Kerr, Marsh, Ikemoto, Darilek & Barney, 2006; Mandinach, 2012; Schildkamp & Teddie, 2008; Schildkamp, Visscher, & Luyten, 2009; Wohlstetter, Datnow, & Park, 2008). Although teachers seem to appreciate having access to various types of student data—including classroom assessments, teacher observations, benchmark assessments, state tests—they frequently struggle to use student data effectively due to a lack of skills and knowledge to formulate questions, select indicators, interpret results, and develop instructional responses (Cosner, 2012; Huguet, March & Farrell, 2014).

The demands of policymakers for school leaders and teachers to use data raise several questions concerning district and school conditions that help or hinder teachers' data use to drive instructional improvement (Honig & Coburn, 2008; Schildkamp & Kuiper, 2010). Researchers found that many schools lack the capacity to actively use data and implement evidence-based practices to improve instruction in schools (Diamond & Spillane, 2004; Ingram et al., 2004; Wohlstetter et al., 2008). Consequently, more school districts are allocating additional resources to increase the use of student achievement data to inform instruction in schools identified as needing improvement. To help build schools' data use capacity, districts have invested in data management systems, professional development to strengthen data use expertise at the school level, and some districts have even contracted with external agencies and data consultants to assist in their capacity-building efforts at the district and school level (District of Columbia Public Schools [DCPS] Press Release, 2012; Wohlstetter et al., 2008). These efforts to outsource data management systems and data expertise to private, for-profit partnerships reflect neoliberal

ideology that privileges business-oriented education policies and explicitly links corporate interests with education practices and goals.

> NCLB follows the pervasive logic that the market can do things better that public institutions, from managing retirement funds, to providing health care, to running prisons. Test scores serve as a surrogate for productivity, and business is called on to supplement the work of educators who by definition have failed (Lipman, 2006, p. 36).

Significance of the Problem

Thus far, a preponderance of research on data-driven decision making has focused on teachers being underprepared to engage in effective data-driven decision making and their indifference toward using student data. More specifically, a great deal of research has primarily focused on teachers' lack of requisite knowledge and skills for data-driven decision making (Dunn, Airola, Garrison, 2013; Lachet & Smith, 2004; Lachet & Smith, 2005; Volante & Fazio, 2007; Wayman, 2005). However, on a promising note, some studies indicated that coaches, professional learning communities, and principal leadership have been important mechanisms for teacher learning and can potentially mediate teachers' data use in ways that lead to instructional changes in classrooms (Cosner, 2012; Dunn et al., 2013; Marsh & Farrell, 2014), especially classrooms serving minority students (Marsh, Bertrand, & Huguet, 2014). Additionally, Park, Daly, and Guerra (2012) found that urban school leaders can influence the implementation of data-driven decision making by using strategic framing. Specifically, urban school leaders can persuade educators of the relevance of using student data for decision making by intentionally framing data use as a method to confront student achievement and opportunity gaps, a strategy for promoting shared collective responsibility for school improvement, and a practice that supports the creation of common student growth goals and progress monitoring of student learning.

Studies have shown that one promising approach to providing teachers with better guidance on using data to inform practice is the use of instructional coaches and data coaches (Huguet, Marsh, & Farrell, 2015). These coaches are teacher educators who offer on-site and ongoing instructional support to educators. Despite the widespread use of coaches and data-driven decision making, there is limited research examining how coaches support data-driven decision making in schools and the degree to which these efforts improve teaching and student achievement (Marsh, McCombs, & Martorell, 2010; Marsh & Farrell, 2014).

Dunn and her colleagues (2013) suggested another promising approach may be professional learning communities (PLC) that provide an optimal context for addressing teachers' data-driven decision-making concerns and improving teachers' data-driven decision-making practices. Research on teacher learning has critiqued the one-shot professional development workshop paradigm, which is typically provided outside the context of a school and focuses on the dissemination of information while neglecting the important role teacher beliefs play in taking up new knowledge and practices. In place of this model, education researchers promote ongoing job-embedded professional learning to address teachers' beliefs and concerns and achieve change in teacher practice (Bruce, Esmonde, Ross, Dookie, & Betty, 2010; Coburn & Stein, 2006; Dunn et al., 2013a; Dunn et al., 2013b). Research has indicated that PLCs and instructional coaches—data coaches and literacy coaches in particular— can influence teachers' data use and potentially change instructional delivery (Marsh, Bertrand, & Huguet, 2014).

Despite a heavy push in schools to use data to drive instruction, few studies have explored a key aspect of effective data use—teachers' sense-making of data, or the way in which teachers explain or make sense of the root causes of the outcomes observed in data. Teacher sense-making is critical to consider the possible impact data-use practices have on some student

groups, such as English Language Learners (ELLs) and students with special needs (Bertrand & Marsh, 2015). For instance, teachers' sense-making of data may be influenced by their past experiences with and beliefs about students in special education and ELLs, who are often the target of accountability policies and data-use directives. According to Bertrand and Marsh (2015), how teachers attribute student learning outcomes is especially important because it can shape their future instructional responses to data and expectations of student performance. For example, teachers may attribute low test scores to poor instruction or to perceived student deficits.

Because there are limited studies that investigate the change process related to teacher adoption and application of data-driven decision making at the classroom level, additional research is required to explicate how to create a data-literate faculty (Dunn et al., 2013; Little, 2012; Mandinach, 2012). According to Little (2012), micro-process studies that investigate the actual practices teachers employ as they collectively examine and interpret student data or the ways in which the contexts for data use come to occupy a central or peripheral part of teachers' ongoing work are relatively underdeveloped. To address this gap in the research literature, a deeper examination of teachers' data use practice in collaborative learning communities and within coach-teacher interactions is needed. Research of this kind can potentially improve the facilitation of PLCs for collaborative data use and the implementation of effective coaching to build teacher capacity to interpret and respond to student learning data (Huguet, Marsh, & Farrell, 2014; Marsh et al., 2014). To extend the body of knowledge on data use for teacher and school improvement, an examination of how schools support teachers in using student data, how teachers become effective data-driven decision makers, and teachers' beliefs about data-driven decision making is warranted.

The education reform movement in the United States is fundamentally about improving urban public schools—every educational issue is magnified and every potential solution is more challenging to implement in America's major cities (Snipes, Dolittle, & Herlihy, 2002). Schools in urban areas serve 40% of the country's minority populations and 30% of economically disadvantaged students. It is in our country's inner cities that the burden of not implementing successful improvement strategies (from standards reform, student testing, governance, busing, vouchers, charter schools, social promotions, and class sizes to accountability measures) disproportionately impacts African American and Latino students, children with disabilities, English language learners, and poverty-stricken communities. Urban schools serving mostly African American, Latino, or low-income students suffer from a range of issues, which may explain their unequal outcomes. Typically, these schools have fewer qualified teachers and limited monetary resources. Teachers in low-income schools often report a low sense of responsibility for improving student learning (Clotfelter et al, 2010; Diamond et al., 2004). For a host of reasons, urban schools tend to have a lower capacity to educate their students.

Some researchers who studied school inequality argue that school reform efforts alone cannot substantially reduce achievement gaps as measured by standardized tests (Jencks et al., 1972). A more recent examination of the achievement gap resulted in a similar position. Rothstein (2004) claimed that schools are unable to overcome the influences of poverty no matter how well-trained teachers are, yet some scholars continue to suggest that schools and teachers have a major role to play in improving the learning outcomes of underserved students.

Although there are federal and state policy agendas to improve student achievement in urban schools, the resources, guidance, and support to impact change in urban education has not followed in sufficient scope and magnitude (Balfanz & Byrnes, 2006). Nevertheless, when

looking at National Assessment of Educational Progress (NAEP) data, the findings generally indicated that urban education has significantly improved over the years in the area of math but not reading. Snipes, Dolittle, and Herlihy (2002) found that with the many reforms that urban schools pursue to increase performance, policymakers and researchers were not investigating which improvement strategies were actually improving urban school achievement. Thus, despite more than 30 years of urban school research and reform aimed at improving the academic performance of disadvantaged students in high-poverty schools, there is limited insight into which school policies and classroom practices actually reduce achievement gaps.

Data use in low-performing, urban schools is an emerging body of research that builds on school reform literature. In research and practice literature, data-driven decision making is commonly cited as building capacity for school improvement, educating students equitably, and reducing achievement gaps (Armstrong & Anthes, 2001; Bernhardt, 2000; Faria et al, 2012; Killion & Bellamy, 2000; Johnson, 2002; Lachet & Smith, 2004; Mason, 2002; Symonds, 2004). Studies indicate there are several important factors that influence data use in urban schools. In particular, researchers point to policy contexts, school conditions and climate, classroom practices, teachers' attitudes toward data use, and teachers' beliefs about the students they serve as influential factors that either promote or hinder the effective use of data in urban schools.

Purpose Statement

The purpose of this exploratory research is to focus on how a PLC and coaching activities led by an external literacy consultant influenced teachers' perceptions of student assessments, data use, and literacy practices in an urban, under-performing elementary school. Thus, this study aims to address a gap in literature pertaining to the creation of data-literate teachers and to extend the scholarship of collaborative data practices in urban education. In particular, a closer look is needed at how teachers in an urban school collaboratively engage with student

assessment data, learn to make sense of student data, and connect their interpretation of student data to classroom instruction in an effort to educate students equitably and reduce achievement gaps (Lachet & Smith, 2004, 2005).

This study is qualitative and seeks to better understand how literacy teachers in a low-performing, high-poverty elementary school who are participating in an externally funded project to enhance teacher data use and improve literacy instruction in classrooms serving mostly Latina/o and African American students. Further, this study examines how the PLC and coaching activities at the school may or may not affect this process. In general, qualitative case study methodology allows researchers to explore complex phenomenon—interventions, relationships, communities, or programs—in context using a variety of data sources and supports the deconstruction and subsequent reconstruction of various phenomena (Denzin & Lincoln, 2000; Yin, 2003). An exploratory case study design is used to capture the details of data-driven instructional decision making of 15 elementary school teachers in an urban school and the context, social practices, and outcomes of a data-centered PLC and coaching activities led by an external literacy consultant.

Research Questions

The research questions that guide this exploratory study are listed below:

RQ1. How did teachers perceive student assessment after participating in a coaching project that focused on data-driven instruction in an underperforming urban elementary school?

RQ2. How did a PLC focused on data-driven literacy instruction influence teachers' perceptions of literacy instruction in an urban underperforming school?

RQ3. How did teacher coaching provided by an external literacy consultant influence teachers' perceptions of literacy instruction in an urban underperforming school?

Theoretical Methodological Perspective

A review of research has shown a clear link between research questions and methodology. The qualitative case study design selected for this dissertation is rooted in the interpretive theoretical perspective, which guides and anchors the data collection and analysis. Jones, Torres, and Armino (2006) posited that qualitative case studies with a theoretical perspective add "philosophical richness and depth to a case study and provide direction for the design of the research project" (p. 54). Similarly, Yin (2003) argued that case study research should identify a theoretical perspective at the beginning of the investigation, because it influences the research questions, data collection, interpretation of data, and analysis.

In general, theories are used to explain "how" and "why" something happens (Johnson & Christensen, 2007, p. 7). Interpretivism, specifically, seeks to develop an understanding of an action, event, and shared experiences between individuals. Schwandt (2000) posited that to find meaning in action or to attempt to understand what a particular action means, researchers must interpret what the actors are doing or saying. Moreover, Miles and Huberman (1994) argued that qualitative researchers following the interpretive perspective have their own understandings, their own convictions, and their own conceptual orientations that color their interpretive lens. In embracing interpretivism throughout the research process, researchers must be keenly aware of their assumptions, experiences, and relationships with participants, which will inevitably influence interpretation of what is seen and heard during data collection and what understanding emerges through analysis of findings.

Summary

This chapter introduced the study for the dissertation by presenting an overview of the background and problem statement, highlighting the significance of problem and the study's

purpose, stating the research questions being explored, and offering a theoretical methodological perspective. Chapter 2, the literature review, outlines the scholarly work on data-driven decision making in schools and professional learning strategies aimed at supporting teachers' data use to improve classroom instruction. Chapter 3, the methodology section, defines the epistemological framework used in this qualitative case study, lays out the research design and site used, and describes the participants and data collection methods involved in the investigation. Additionally, an overview of the data analysis employed, researcher's positionality, and limitations are provided in Chapter 3. Chapter 4 will discuss the findings for this study. Last, Chapter 5 will provide implications of this study's findings and recommendations for how future research can continue to build on the scholarship on teachers' collaborative data use to improve literacy instruction in urban schools.

CHAPTER 2. LITERATURE REVIEW

Introduction

The literature review is organized to provide a general overview of data-driven decision making and the complexities that aid or impede the implementation of teachers' collaborative data use to inform classroom instruction. First, a brief look at how policy contexts shape the use of student achievement data is offered. Second, an examination is provided of how states, districts, and schools have invested resources into the infrastructure and technological tools designed to provide teachers and principals with access to student assessment data. Third, a summary is given of the role interim assessments play in helping teachers modify instructional strategies to address students' learning needs. This section is followed by a brief review of the training and support needed to create a data-literate teaching force and the requisite skills and knowledge for transforming student assessment data into instructional responses. The final sections of the literature review examine school conditions that promote a culture of data use and capacity-building interventions, mainly professional learning communities and coaching, that facilitate, enable, and support teachers' data-driven decision making.

Policy Contexts for Data Use

Over the past several decades, public education in the United States has experienced a major transformation in which students learn from teachers the requisite knowledge and skills to do well on the state's standardized tests. Recent state and federal policies have emphasized using standardized tests to evaluate students' performance and schools' quality. At the federal level, the No Child Left Behind Act of 2001 uses student scores on state standardized tests to

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determine if schools are succeeding of failing to make "adequate yearly progress." NCLB accelerated a growing trend toward the current high-stakes accountability movement. In response to these accountability demands, many school districts began to analyze student assessment data in an effort to promote high-quality instruction and improve student achievement (Kerr et al., 2006). In an attempt to close achievement gaps, the U.S. Department of Education implemented new policies and programs that promoted data use in schools and classrooms. These systems were intended to enhance the ability of states to efficiently and accurately manage, analyze, and use education data.

In 2005, the State Longitudinal Data System (SLDS) grant program, managed by the National Center for Education Statistics, distributed grants to assist states in developing data systems. Under the precept that better decisions require better data, the SLDS grant program propelled the expansion of K-12 and P-20 longitudinal data systems across the country. The federal stimulus package, known as the American Recovery and Reinvestment Act of 2009 (ARRA), continued to support states in building and using statewide longitudinal data systems to improve student achievement. Through ARRA, 20 longitudinal data systems grants were funded to support the development and implementation of data systems for tracking student progress from early childhood to postsecondary education.

The focus on data systems continued with the U.S. Department of Education's Race to the Top (RTTT) competition. RTTT grants called states to build robust data systems that measured student growth and success and informed teachers and school leaders about how they could improve instruction. Although these federal policies sent a strong message about the significance of using data to inform educational practices and creating the infrastructure to

facilitate data-driven instruction (Faria et al., 2012), they overlooked the resources and support

needed to build human capacity to understand and use data to drive instructional improvement.

These accountability policies seemingly placed sole onus on teachers for determining

how to raise student achievement irrespective of variables outside their control that influence

student success. Yet, without the appropriate guidance and support to classroom teachers that

demonstrated how to accomplish the task of better teaching and learning, educators would

fumble and schools would continue to fail to meet students' needs. Some researchers posit that

this shifting emphasis on data necessitates not only new data systems that are accessible to

educators and administrators, it requires individuals to develop the knowledge and skills to

successfully use data to drive improvement. However, these same researchers note that many

districts and schools lack the resources and staff capacity to use data for school improvement

efforts, especially urban schools (Kerr et al., 2006).

<div align="center">**Accessibility of Student Data**</div>

Using student performance data to make instructional decisions is not a new

phenomenon. In fact, the expectation for teachers to be data-driven is so common that criteria

regarding data use are included in many teacher evaluations. What is relatively new, however, is

the accessibility of test-score data that educators are expected to use to systematically to inform

teacher practices (Wayman, 2005). In the past, access barriers have impeded the use of data at

the classroom level to inform and impact instruction. According to Wayman (2005), although

schools have been 'data rich' for years, they were also 'information poor,' because the immense

amount of data they had were often stored in ways that were inaccessible to most practitioners.

In many cases, student data have been stored in forms that are difficult to access, manipulate, and

interpret. For instance, data results may not have been shared with school staff when they needed

it or data reports may have been presented in complex and confusing formats, which did not facilitate use.

With funding to support the proliferation of educational data systems and given recent technological advances in data-warehousing applications that allow efficient organization, access, and disaggregation of student data and (Hamilton, 2005), the range of data available to educators is extensive—student demographics, educational program data, student attendance, student suspension data, and student performance data. These state and district data systems allow teachers access to previously unattainable data describing their students.

Nevertheless, some researchers claim data are rarely used effectively to improve student-learning opportunities (Wayman & Stringfield, 2003). In many cases, educators are overwhelmed with the amount of data available to them and struggle to distinguish what types of data are most useful. Although researchers emphasize the importance of advanced data-system technology, student data have to be presented in meaningful formats for teachers and school leaders to act on (Rudnor & Boston, 2003; Thorn, 2001). Hence, technology capacity alone is not the answer. Educators have to be willing and trained to use data management platforms and be able to ask good questions about student data, accurately interpret data, and apply data results appropriately and ethically (Mason, 2002). Wayman (2005) argued that data accessibility is just the tip of the iceberg when comes to equipping teachers with the tools and know-how to use student data effectively:

> Data access provided by technology is a necessary condition for informed inquiry into educational practice, but such access is not sufficient on its own… The mere presence of data does not automatically imply that usable information is available; educators need support to use these data to the fullest extent. (p. 296)

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Benchmark and Interim Assessment

Several studies on formative assessment indicate that teachers can use classroom-embedded student assessments to elicit achievement gains (Black, Harrison, Lee, Marshall, & Williams, 2002; Heritage, 2007; Shepard, 2005). Although Black and Wiliam (1998) proposed that the use of formative assessments can provide essential feedback for modifying instructional strategies to address students' skill and knowledge gaps, they cautioned against positioning formative assessment as a "magic bullet" for school reform efforts.

Typically, educators use data intended for compliance; however, what is most needed is timely, diagnostic information on the students they teach (Lachet & Smith, 2005; Rudner & Boston, 2003). Although annual standardized tests allow policymakers and the public to rate and rank school quality across a district, state, and the country, teachers and school leaders require more frequent feedback on student progress. Along with frequent student learning data, educators benefit from having multiple assessment measures that provide a more comprehensive snapshot of students' strengths and weaknesses (Symonds, 2004). According to Pardini (2000), teachers are better equipped to adapt instructional practices when they have current and varied information about the proficiencies and skill levels of their students.

Because formative assessments are not typically standardized across schools, classrooms, or even students, aggregating formative assessment data is not generally useful (Perie, Marion, Gong, & Wurtzel, 2007), whereas benchmark or interim assessments provide data that can be aggregated to the student, teacher, and school level and are often designed to predict student performance. School districts typically implement benchmark assessments to support teachers in monitoring and improving student learning throughout the school year and, ultimately, preparing for end-of-year accountability tests.

Benchmark assessments are administered at regular intervals and intended to help

teachers plan instructional interventions aimed at enhancing student learning. According to

Marshall and Drummond (2006), schools that serve disadvantaged students who academically

excel analyzed their benchmark assessment data as part of their overall strategy for improving

achievement. Another study focused only on low-attaining students and students with learning

disabilities showed that feedback from frequent assessment helped both student groups improve

learning outcomes (Fuchs et al., 1997). Faria et al. (2012) posited that benchmark or interim

assessment data have three intended purposes that lead to improved and more responsive

teaching and, thus, increased student learning outcomes:

1. To better understand the academic needs of individual students and respond to these needs by targeting instruction, support, and resources accordingly.
2. To better understand the instructional strengths and weaknesses of individual teachers and use this information to focus professional development, peer support, and improvement efforts.
3. To support and facilitate conversations among teachers and instructional leaders regarding strategies for improving instruction.

Data Literacy

Although research suggests teachers appreciate having access to various types of data,

especially benchmark assessments and state tests, many teachers find data puzzling due to a lack

of knowledge and skills. Because data analysis and interpretation are complex tasks, educators

need explicit training on how to understand benchmark test results to fully comprehend student

strengths and weaknesses. It is not enough for school leaders and teachers to know what the

achievement gaps look like in their school and which students are performing below grade level.

To take targeted action to close achievement gaps, they have to also understand which requisite

skills these students are missing. To address this, teachers require support in learning how to

formulate questions about student data, interpret results, and develop instructional responses

(Cosner, 2012; Gullo, 2013; Kerr et al., 2006; Olah, Lawrence, & Riggan, 2010).

It is important to keep in mind that the existence of student data does not ensure that teachers will use it to make informed decisions. That is, data alone do not equal information or action (Wayman & Cho, 2008). Herman et al. (2008) found that teachers were typically not trained in assessment and were not introduced to the content and pedagogical knowledge required to interpret student performance results and make instructional changes.

Love (2004) characterized data-literate teachers as being able and willing to examine multiple measures and multiple levels of data, to refer to research, and to develop sound interpretations. After teachers and school leaders understand student data, they need to how to connect their interpretations of student data to classroom practice. This act requires teachers to have a deep and broad understanding of instructional strategies and curricula so they can make well-informed choices regarding how to address specific student needs. High-quality professional development coupled with classroom-based coaching can help build teachers *pedagogical data literacy*. Mandinach, Parton, Gummer, and Anderson coined the construct *pedagogical data literacy* as:

> The ability to transform information into actionable instructional knowledge and practices by collecting, analyzing, and interpreting all types of data (assessment, school climate, behavioral, snapshot, longitudinal, moment-to-moment, etc.) to help determine instructional steps. It combines an understanding of data with standards, disciplinary knowledge and practices, curricular knowledge, pedagogical content knowledge, and an understanding of how children learn. (2015, p. 26)

Pedagogical data literacy consists of three interlocking knowledge domains that allow teachers to understand data in terms of their content area and then translate that actionable knowledge into instructional aspects:

1. *Data use* is the ability to analyze and use data.
2. *Content knowledge* is a teacher's understanding of a specific a subject or content area.

3. *Pedagogical content knowledge* (Shulman, 1986) is the ability to apply knowledge of pedagogy in the context of the content area.

Building a Culture of Data Use

In many cases, school districts explicitly state data use as a priority and make personnel decisions to hire school leaders to promote data use in schools. On one hand, studies have found that teachers' own use of data depends largely on if and how principals support the use of data in schools and classrooms (Lachat & Smith, 2005; Mason, 2002; Murnane, Sharkey, & Boudett, 2005). Young (2006) conducted observations and interviews with principals and teachers about data use and concluded that effective data use was more likely to occur when principals modeled data use for their teachers. On the other hand, Anderson, Leithwood, and Strauss (2010) found that although principals play a major role in influencing data use in schools, many do not create conditions conducive for effective and efficient data use.

Principals can create a school culture of data use by clearly articulating a shared vision, norms, goals, and expectations for data use. This means establishing measurable goals at the system, school, classroom, and individual student level. Furthermore, school leaders should create a school climate that involves continuous inquiry, learning, and improvement based on data rather than using data to place blame (Faria et al., 2012; Schildkamp & Kuiper, 2009; Wayman & Stringfield, 2006). Marsh et al. (2006) found that teachers used data more frequently in schools where principals had committed to data-driven decision making and had a clear vision about data use at the school level. These schools were also characterized by openness and a sense of collaboration around data use in contrast to schools where data analysis was perceived as an individual activity.

Park, Daly, and Guerra (2012) examined how school leaders in an urban high school intentionally constructed diagnostic, motivating, and prognostic frames to promote data-driven

decision making. According to their study, urban school leaders were more likely to influence school culture around data use and the extent to which teachers believed it was a meaningful strategy for school improvement when principals developed a) diagnostic frames that confronted student achievement and learning opportunity gaps, b) motivating frames that positioned school improvement as a collective responsibility, and c) prognostic frames focused on making incremental change to sustain reform efforts and creating measurable school, classroom, and student goals to monitor progress. When school leaders situate data use within a high-stakes accountability system, teachers may be apprehensive about using student data to shape the decision-making process (Ingram et al., 2004). Typically, data use within an accountability culture has a short-term time frame, emphasizes student test scores, and excludes teacher voice. Furthermore, data for accountability purposes are mainly used to identify problems and for compliance whereas data use within an organizational learning culture has a long-term time frame, focuses on student learning and instructional improvement, and includes teacher and principal voices (Firestone & Gonzalez, 2007).

School leaders can support effective data use in schools by establishing collaborative data teams and setting aside adequate time for teams to meet regularly during the school day. Additionally, principals should assess the effectiveness of collaborative data practices in schools. Leithwood and Menzies (1998) described work-group effectiveness as the ability of a work group to achieve positive outcomes in terms of adult work, adult behavior, and adult attitudes. Specifically, school leaders can assess the effectiveness of data-centered professional learning communities by evaluating the presence of structural elements such as focused meeting agendas and a structure for facilitating an inquiry process. School leaders should also assess the presence of interpersonal process elements such as team norms, conducive behaviors for collaboration,

and team roles within a professional learning community. In addition, principals can help build

staff capacity for data use by organizing meaningful teacher training and coaching activities.

Several studies suggest that trained teachers are more apt to modify their teaching practices

appropriately on the basis of the knowledge they have gained from assessment data (Marsh et al.,

2006; Mason, 2002).

Data Use to Address Equity Issues

Despite myriad school reform efforts, significant gaps in academic achievement persist

among different groups of students due to historical, economic, and sociopolitical inequalities

and inadequacies in the United States education system (Ladson-Billings, 2006). According to

longitudinal results reported by National Assessment of Educational Progress (NAEP), gaps in

achievement appear by income, race, and ethnicity with a large percentage of African American,

Latino, and Native American students performing at the low rungs of the achievement ladder.

Conversely, a large percentage of middle- and high-income White and Asian students, mainly

Chinese American, Japanese American, and Korean American, perform at the high rungs of the

achievement ladder (NCES, 2011).

Although public education is currently in an era of high-stakes standardized testing and

test-based accountability, critical conversations about effective policies and strategies that create

equitable outcomes for underserved populations remain absent from the discourse. In low-

performing schools, school leaders and teachers are faced with dual priorities driven by school

reform—increasing demands for accountability and equity[2] concerns related to student

achievement (Lachat & Smith, 2005). These parallel agendas, equity and accountability, require

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[2] When referring to "equity" within the contexts of this paper, I draw on Hart and Germaine-Watts' (1996) definition—"an operational principal that shapes policies and practices which provide high expectations and appropriate resources so all students can achieve the same rigorous standards—with minimal variance due to race, income, language, and gender" (p. xx).

educators to make instructional decisions based on accurate, timely, and meaningful student learning data.

Although closing the achievement gap between low- and high-achieving groups of students has been a focus of federal and state policy over the years, there is limited research on school-level policies and practices that increase student performance and, ultimately, close achievement gaps (Symonds, 2004). In Ruth Johnson's (2002) book *Using Data to Close the Achievement Gap: How to Measure Equity in our School,* she proposed that schools engage in a critical self-examination of how learning opportunities are allocated to all students. As school leaders and educators disaggregate student performance data by race, gender, and grade, they can begin to identify strategies for closing learning opportunity gaps. Moreover, the process of compiling and reflecting on school-level data can bond educators together in a common pursuit to create a culture of data use and high achievement for all students. To effect change in schools, educators require a mindset that closing the achievement gap is not only a collective responsibility but a moral obligation and a realistic possibility (Johnson, 2002; Love, 2004).

Schools that are narrowing the achievement gaps use data in a variety of ways to engage in a continual improvement process. Symonds' (2004) research on San Francisco Bay area schools indicated that there are stark differences between the "gap-closing" and "non-gap-closing" schools with regard to data use. More specifically, "gap-closing" schools engaged in not only the analytical, technical process of data use but the emotional, affective work of changing school culture, building communities, and changing teacher attitudes toward low-performing students (Armstrong & Anthes, 2001). Symonds (2004) asserted that school improvement efforts aimed at reducing educational disparities in urban schools require critical data analysis and conversations with an equity frame.

One way underperforming, urban schools are addressing the achievement gap is by focusing resources on improving literacy instruction to early childhood students. Studies have shown that literacy proficiency in early grades is a leading indicator in a student's academic development. According to Gullo (2013), leading indicators in education are significant in that they are viewed as ways in which student outcomes can be improved and achievement gaps reduced. When school leaders understand literacy to be highly associated with academic success in later grades, they strategically invest resources and time in developing teacher expertise in literacy instruction (Foley et al., 2008; Gullo, 2013).

Supporting Teacher Data Use Through Collaboration and Professional Learning

All too often to prepare for accountability assessments, many teachers feel pressured to teach the test and implement skill and drill activities, which through repetition and review reinforce student memorization and adoption of concepts. After students take the test, staff are notified of testing results, told to improve student-learning outcomes, and sent back to their classrooms to figure out how by themselves. Sadly, this is a common scenario in schools that can lead to feelings of isolation and a sense of helplessness. Many teachers would benefit from structured opportunities to engage in informed reflection, collaborative discussion, and professional learning so they can take appropriate action to positively impact instruction. Collaborative data use involves collective analysis and interpretation of student assessment data. As teachers develop a deeper understanding of students' learning needs, they use this new knowledge to inform a range of instructional practices (Cosner, 2012). Schildkamp and Kuiper (2010) claimed that although the process of inquiry was sometimes frustrating and time consuming, collaborative data use helped teachers break the cycle of isolation, critically inquire about their teaching, focus on evidence-based decisions, and realize that they could influence outcomes through their own teaching.

Building teachers' data literacy and pedagogical content knowledge takes time. More specifically, teachers can benefit from time to collaborate, discuss practice, help each other with challenges, and share effective classroom strategies. Furthermore, regularly scheduled collaborative planning can support the diffusion of improvement strategies. In fact, researchers caution against approaching data use as a one-time event. It should be a continuous, integrated part of practice that is part of an ongoing cycle of instructional improvement (Earl & Katz, 2006; Mandinach, 2012). Researchers recommend embedding collaborative data inquiry and professional learning into the school schedule so that it becomes routine practice over the course of the workweek.

Professional Learning Communities

A growing body of literature focuses on the social processes that influence teacher learning. The communities of practice perspective, which sits within sociocultural learning theory, posits that learning does not occur inside the minds of individuals but rather learning occurs as individuals engage in social and cultural interactions within a sustained community (Lave, 1991; Lave & Wenger, 1991). Within this perspective, learning is conceptualized as the way in which teachers transform their practice within a community through continual "negotiation of meaning" as they interact with one another and respond to changes in their environment. As a result, community members evolve new ways to engage with each other, fine-tune their [joint] enterprise, and further develop their [shared] repertoire (Coburn & Stein, 2006).

In the case of developing teachers' capacity for data-driven decision making, the first dimension of *mutual engagement* can be applied to understand how teachers take up collaborative data use practices as a component of their work instead of working in isolation. Second, the dimension of *joint enterprise* can be used to examine the ways in which teachers bond together to address the shared responsibility of increasing students' reading proficiency.

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Last *shared repertoire of practice* lends itself to exploring how teachers, through their interactions with each other and experts, develop the skills and knowledge required to use student data to inform literacy instruction in the classroom. Nevertheless, most research has not made the explicit connection between learning processes in communities and changes to teachers' instructional practice (Coburn & Stein, 2006; Little, 2002).

The creation of strong professional learning communities in schools is widely considered an important condition for school improvement (Marsh et al., 2014). Although learning in any setting is a complex endeavor, teacher learning under a high-stakes accountability climate and in an underperforming, urban school creates additional pressures and motivations to an already intricate process. Lave's (1991) view of *situated learning* within a sustained community of practice claims learning, thinking, and knowing can occur when people engage in a meaningful activity. Thus, Coburn and Stein (2006) claimed that an effective way to bring about change in teacher thinking and practice was through strong and consistent professional interactions:

> The strength of teachers' professional relationships influence the degree to which they change their practice…Teachers in schools with shared goals, collaboration, a focus on student learning, shared responsibility, and social trust are more likely to make changes in their instructional practice than teachers in weak communities. (p. 27)

Research studies on change processes associated with teacher buy-in and implementation of data-driven decision making emphasize the importance of focusing on the role teacher beliefs play in the acquisition of new knowledge and the adoption of new teaching practices (Bruce et al., 2010). Studies have shown that when teachers' anxiety, misconceptions, and skepticism concerning data-driven decision making are addressed through targeted, job-embedded professional learning, teachers' sense of efficacy for teaching, teacher knowledge of data-driven decision making, and student achievement increased (Bruce et al., 2010; Dunn et al., 2013a;

Dunn et al., 2013b). Research on professional development suggests that to address teachers' beliefs and concerns and achieve real teacher change, schools must move beyond the one-shot seminar or workshop paradigm that focus on the dissemination of information and move toward ongoing job-embedded professional learning (Dunn et. al, 2013; Bruce et al., 2010). Snipes, Dolittle, and Herlihy (2002) also found that the professional development strategy in urban schools was generally fragmented, often consisted of one-shot workshops on a series of topics, and failed to focus on a consistent instructional strategy.

The growing presence of professional learning communities in schools can be seen as the result of strengthening teacher practice through job-embedded approaches. Bruce et al. (2011) defined professional learning as "embedded in the classroom context and constructed through experience and practice in sustained iterative cycles of goal setting, planning, practicing, and reflecting" (p. 1599). For certain, the concept of school data teams is not novel. However, in many instances, data teams involve teachers discussing data and then blaming various factors that they perceive as contributing to a student's academic challenges. These meetings seldom involve teachers discussing how they will change their core instruction let alone evaluate the effectiveness of their data-driven instructional responses. Earl and Timperley (2009) studied the quality of teachers' data conversations and the role data conversations played in informing school improvement decisions and actions. They concluded that teachers in lower-achieving schools had a vague understanding of the purpose for reviewing student data. In contrast, in higher-achieving schools, teachers met more often to examine student assessment data in reading and writing, and they joined that analysis to a discussion of what teaching practices might improve or impede student-learning gains. Principals, teacher leaders, and coaches play an important role in moving professional learning communities from merely meeting over data to

learning through a collaborative data inquiry process. Earl and Timperley (2009) asserted that the goal of collaborative data use was to:

> Set the stage for new knowledge to emerge as participants [teachers] encounter new ideas or discover that ideas that they have held as "truth" do not hold up under scrutiny and they use this recognition as an opportunity to rethink what they know and what they do. (p. 2)

Based on research, teachers are more apt to alter their beliefs about low-achieving students, change their attitudes about data-driven decision making, and develop the requisite knowledge and skills— data literacy and pedagogical content knowledge—for data-driven decision making through professional learning communities. Little (2012) claimed that there are limited studies of school workplace interactions that have begun to uncover the ways in which interaction in collaborative groups promotes or constrains teacher learning, instructional change, and peer support among teachers. Consequently, additional research on the activity settings in which teachers use data to inform instruction is needed (Datnow & Hubbard, 2015; Little, 2012; Marsh et al., 2014). This research would not only focus on the individual ways in which teachers employ data-driven decision making in their respective classrooms, it would also attend to the actual practices teachers use in group settings to collectively examine and interpret student data.

Coaching

One central strategy districts and schools have begun using to build teachers' data-use capacity to interpret and respond to student learning data and broaden teachers' instructional repertoire is coaching (Huguet, Marsh, & Farrell, 2014; Marsh et al., 2010; Means et al., 2009). An instructional coach is viewed as a master teacher who provides on-site and ongoing instructional support for school educators (Marsh et al., 2010). Instructional coaching has been adopted by nearly every urban district in the United States and is widely recognized by policymakers at both the state and federal levels as a strategy for improving teacher practice and

student achievement (Marsh et al., 2008; Marsh et al., 2010; Matsumara, Garnier, & Resnick., 2010). Furthermore, literacy coaches have increasingly become a cornerstone of literacy reform policies and programs in underperforming, urban schools (Marsh et al., 2010).

Two popular coaching positions, instructional coach and data coach, have been central strategies for providing educators with professional development on data-driven decision making. More specifically, coaching in schools has played an integral role in developing teachers' data literacy and improving literacy instructional practices, particularly as researchers claim there are limited courses and opportunities available to pre-service teachers for data literacy development in teacher preparation programs (Mandinach & Gummer, 2013). According to Matsumara et al. (2010), the objective of instructional coaching is to cultivate embedded, practice-based learning opportunities for teachers aimed at improving the quality of instructional practice and student learning.

Coaching is frequently seen as a vehicle for bringing about collaborative interactions in schools (Matsumara et al., 2010). Most commonly, instructional coaching is school-based, collaborative, and is conducted in a one-on-one or small group setting. In general, instructional coaches serve in a non-evaluative support role for educators and do not directly deliver instruction to students unless they are modeling effective instruction for educators (Marsh et al., 2010). Empirical research on the impact of coaching on teacher practice indicates that the intervention has promise. For instance, Joyce and Showers (1996) found in several studies that teachers receiving coaching support practiced new skills more frequently and applied them more appropriately in their classrooms than other teachers. A review of coaching literature suggests several positive outcomes, including improvements on educators' ability to plan and organize, provide instruction to struggling students, use classroom management strategies, and address

instructional objectives. In more recent studies, researchers have associated coaching

interventions with improvements in school culture, teacher collegiality, and collaboration;

positive changes to teachers awareness, comprehension, alignment, and implementation of state

standards; and knowledge of how to apply learning from professional development to their

classroom practice ((Marsh et al., 2010; Wong & Nicotera; 2006). Furthermore, studies have

shown that teachers were more likely to implement changes in instruction while being coached

than while working independently and that the instructional changes that resulted from coach-

teacher interactions were sustained after coaching ended (Kohler, Crilley, Chearer & Good,

1997; Kohler, McCullough & Buchan, 1995).

Coach-teacher interactions that are characterized by shared goals, a focus on student

learning, and trust can lead to improvements in instruction and learning by expanding teachers'

access to expertise and knowledge and sustaining teachers' motivation to continually improve

their instruction (Coburn & Stein, 2006; Matsumara et al., 2010; Marsh et al., 2014). However, it

is important to realize that the quality, frequency, and type of coach-teacher interactions can vary

greatly between schools and between teachers in the same school, which potentially impacts the

degree of new knowledge and skills teachers gain from coaching. For instance, one study of a

literacy coach found that teachers' perceptions of coaches' skills, expertise, and experience

influences that coach's impact on instructional change in the school (Marsh, McCombs, &

Martorell, 2012).

Instructional coaching has been a centerpiece for school improvement and state and

district literacy reform initiatives such as America's Choice and national grant programs like

Reading First (Huguet, Marsh, & Farrell, 2014; Marsh et al., 2010). Under NCLB, the U.S.

Department of Education authorized Reading First funds to support increased professional

development through coaching to ensure teachers had the skills they needed to effectively teach

reading to early childhood students. Instructional coaches are often expected to identify teachers

who could benefit from coaching support, observe classroom instruction, model effective

lessons, gather data, and connect teachers with resources intended to enhance their instructional

practice (Huguet, Marsh, & Farrell, 2014). Typically, the focus of an instructional coach is

primarily on pedagogy and content-specific curriculum. Research has shown that instructional

coaches, particularly literacy coaches, can help increase teachers' catalogs of instructional

reading strategies. For example, when student data indicate a weakness in decoding text, coaches

support teachers in learning how to be more effective in teaching decoding skills to students.

Additionally, instructional coaches can detect gaps in curriculum and advise teachers on

appropriate reading materials to use with students.

Furthermore, data coaches have become more widespread with Race to the Top grants, as

demonstrated by Delaware's dedication of $8.2 million of their Race to the Top funds to a data

coach program (Huguet, Marsh, & Farrell, 2014). Many states have used RTTT funds to build

teachers' data-use capacity throughout the state. The role of the data coach is often to improve

problem solving related to student data and increase the use of data for monitoring and planning

student growth (Lachat & Smith, 2004). These coaches use their expertise to connect teachers to

student data, interpret data, apply new information to classroom practice, facilitate constructive

dialogue, and identify instructional responses (Huguet et al., 2014). One study (Marsh et al.,

2014) found that data coaches and literacy coaches mediated literacy teachers' data use and

helped them change instructional practice in classrooms serving Latina/o and African American

students. However, in the same study, researchers found that coaches who solely focused on

helping teachers access and analyze data without additional focus on instructional responses to data did not support teachers in changing their instructional practice.

Research has shown that principals' actions and their beliefs regarding the role and responsibilities of an instructional coach play a significant role in the successful implementation of coaching activities in schools (Matsumara et al., 2010). As it relates to literacy coaches, in particular, Burch and Spillane (2003) found that principals who were more actively engaged in literacy reform initiatives at their schools were more likely to support the efforts of their literacy coaches. For example, Matsumara et al. (2009) found that teachers were more likely to participate in a literacy coaching program when their principal endorsed the coach's content knowledge and expertise. Furthermore, teachers were more likely to actively engage with literacy coaches when the principal supported a coach's leadership role in the school and gave the coach more autonomy in their role (Matsumara et al., 2010).

Given the prevalence of data coach and instructional coach positions across the country, research is needed that examines the implementation of coaching as a strategy for influencing teacher practice (Huguet et al. 2014). With the widespread use of coaches to support educators' data-driven decision making, there is limited understanding of if and how coaches support data-driven decision making in schools and the extent to which this strategy is connected with improvements in teaching and student learning (Huguet et al. 2014; Marsh et al., 2010). Current research on data-use interventions, such as coaching, offer limited information on effective or even exemplary coaching practices that build teacher capacity to use data to guide and improve instruction (Huguet et al., 2014; Marsh et al., 2014; Marsh et al., 2010). There is even less information on the conditions in which effective coaching occurs (Coburn & Turner, 2011; Little, 2012; Young & Kim, 2010).

To address this research gap, researchers have drawn on theoretical frameworks, mainly Vygotsky's sociocultural learning theory and theory of actions for data use, to identify practices and contextual factors that shape and support coaches' work with educators around student data. Researchers often look to learning theory to rationalize the use of coaching to support teachers' professional development and capacity building to understand and use data effectively. Specifically, learning theory implies that teachers learn best when they are given opportunities to discuss and reflect with other teachers, to practice application of new ideas and instructional techniques, to receive feedback from a master educator or expert, and to observe effective modeling of instruction (Marsh et al., 2010).

Summary

Even though there is limited research available on how literacy coaches support teachers' data use, some conclusions can be drawn from the broader literature on coaching on the factors that enable or hinder effective coaching practices. For instance, the content knowledge of an instructional or data coach plays can play a significant role (West & Staub, 2003). One study of a literacy coaching program found that teachers' perceptions of coaches' expertise and experiences were correlated with their ratings of coaches' impact on instructional change (Marsh, McCombs, & Martorell, 2012). This means when educators viewed their instructional coach as having sufficient content knowledge and skills to support them, educators believed that the coaches had a greater influence on their instructional practice.

Studies have shown that there is a core set of coaching practices that contribute to building teachers' capacity to use student data. However, it is important to note that instructional coaches differ in the variety and frequency in which they employ effective coaching practices. These coaching practices include the following:

- *Assessing teacher needs* to create specific goals for data-use work;
- *Modeling effective data use*, which involves explaining and demonstrating ways to interpret, respond to, and act on student learning data;
- *Observing teachers* to monitor how they engaged in particular phases of the data-use cycle;
- *Providing feedback and sharing expertise*, which consisted of suggesting next steps for instructional practice;
- *Dialoguing and questioning* about student data and literacy instruction, which helped teachers make changes to their instructional planning and delivery; and
- *Brokering* the divide between student data and application through their ability to connect teachers to expertise and resources that support the data-driven decision-making process (Marsh, McCombs, & Martorell, 2012).

Scholarship has also shown that a coach's interpersonal skills are as important to her/his role and relationship with teachers as is content knowledge (Brown, Reumann-Moore, Hugh, du Plessis, & Christman, 2006; Ertmer et al., 2005). Instructional coaches must be able to build supportive and trusting relationships with the educators with whom they work (Matsumura et al., 2010). Ultimately, for instructional coaches to effectively share their expertise and influence teachers' classroom practice, they must be skilled with working with adult learners. Marsh and Farrell (2014) reported in their study that some teachers preferred learning in a professional learning community due to the shared identity of the team members as opposed to working one-on-one with a coach. In the same study, the researchers noted that the intensity of coaching interactions may vary within a group setting and one-on-one activities based on the learning needs of teachers, group dynamics, and what the different stages of data-driven decision making might require (Corbin & Strauss, 2008; Emerson, Fretz, & Shaw, 1995).

School contextual factors can also play a significant role in mediating coaching interventions. As with other school improvement interventions, coaching can be influenced by the socio-political climate surrounding implementation (Marsh, 2002). In particular, teachers who are influential within a school's socio-political culture may sway others to be receptive or reject a coach's interaction or suggested instructional intervention (Stoelinga, 2008). Because the

political climate within a school can effect teachers' interactions with and perceptions of coaches, successful coaches are aware of the school's socio-political dynamics and approach their work with teachers in ways that are viewed as non-threatening (Lachat & Smith, 2005). For instance, if teachers are reluctant to work with an instructional coach, their perceptions of the coach's effectiveness are diminished (Marsh et al, 2008). These socio-political tensions may be heightened in circumstances where data are perceived as valuable sources of influence, advantage, and power within a school (Huguet, Marsh, & Farrell, 2014). Principal leadership is also a key factor within the school context that can affect an instructional coach's success and the implementation of a literacy coaching program. Research suggests that a principal who actively supports a coach's role in building teachers' data-use capacity, literacy content knowledge, and pedagogical skills may be associated with increased effectiveness (Bean et al., 2010).

Although current research describes a number of factors that help or hinder the influence of a literacy coach to build teacher capacity, especially as it relates to using student learning data to make appropriate instructional decisions, none specifically address what factors set exemplary literacy coaches apart. This dissertation aims to address this research gap by exploring the practices and contextual factors within an urban elementary school that shape a literacy coach's relationship and work with teachers around student reading data. Although this study will not collect student data, the beliefs of teachers, literacy coaches, and principals are significant because perceptions of self- and group efficacy and the success of the literacy coaching program can influence changes to teachers' literacy practices and the overall literacy environment within a school (Ferguson, 2014).

CHAPTER 3. METHODOLOGY

Introduction

This chapter provides a description of the methodology, participants, research site, data collection and analysis, and the researcher's role. This section outlines the techniques or procedures used to gather and analyze data to explore the proposed research questions. The initial research questions and sub-questions guiding this study are as follows:

RQ1. How did teachers perceive student assessment after participating in a coaching project that focused on data-driven instruction in an underperforming urban elementary school?

RQ2. How did a PLC focused on data-driven literacy instruction influence teachers' perceptions of literacy practices in an urban underperforming school?

RQ3. How did teacher coaching provided by an external literacy consultant influence teachers' perceptions of literacy instruction in an urban underperforming school?

There are several compelling reasons that supported the use of a qualitative approach for this study. First, qualitative case study methodology allows researchers to explore complex phenomenon—interventions, relationships, communities, or programs—in context using a variety of data sources and supports the deconstruction and subsequent reconstruction of various phenomena (Denzin & Lincoln, 2000; Yin, 2003). Second, qualitative research methods are especially useful in discovering the meaning individuals associate with social events and lived experiences (Bogdan & Biklen, 2003; Denzin & Lincoln, 2000). The purpose of this study is to

better understand how literacy teachers in an urban, high-poverty elementary school use data to improve literacy instruction.

The research design was selected after careful consideration of various research methodologies, the study's purpose, the research questions, and the researcher's epistemological stance. The foundational tenets that guide qualitative research serve as the means to contextualize and understand the research questions in the study. A qualitative approach is most appropriate for this research because it fosters a better understanding of the lived experiences of the participants, elementary school teachers, and their own understandings of how they collect, make sense of, and work with student literacy data. Furthermore, this research allows participants to articulate the ways in which student literacy data informs teachers' pedagogical decisions.

This study, based in a constructivist paradigm, used an exploratory case study design to capture the details of data-driven instructional decision making of 15 elementary school teachers serving mostly African American and Latino/a students and the context, social practices, and outcomes of a data-centered professional learning community and coaching interactions led by an external literacy consultant. Further, an exploratory case study approach was used to explore how teachers' beliefs and attitudes about student data use influence their data-driven literacy practices in an urban, under-performing school.

Philosophical Foundation

The epistemological stance framing this dissertation is constructivism. Constructivism asserts that individuals construct meaning differently, even when experiencing the same event (Crotty, 1998). There are several assumptions of constructivism, many of which are essential to this qualitative study:

1. Because meaning is constructed by people as they engage with others in social interactions, qualitative researchers use open-ended questions to solicit the viewpoints of participants;
2. People engage with others in social interactions and make sense of those encounters based on their own historical, cultural, and social perspectives; and
3. Meaning is socially constructed and results from human interactions within a community.

These assumptions help remind researchers that interpretations and findings in a qualitative study are context-specific.

Constructivism is a helpful philosophical framework for this study. According to Stake (1995), the researcher is a central instrument in the collection and interpretation of data. Stake further claimed that most contemporary, qualitative researchers promote the belief that knowledge is a social construction rather than a discovery. Stake described constructivism as a belief that knowledge is formed by social interpretations about the world.

This study is based on the interpretations of teachers working in an urban elementary school who are responsible for planning and providing literacy instruction. Of particular interest are the ways in which these teachers interpreted their interactions within a professional learning community and coaching activities focused on student data use and literacy instruction. Furthermore, the study explored teachers' perceptions of the student assessments used, student achievement, and literacy practices within the school and their respective classrooms. Participants in the study constructed their own unique understanding of their individual and shared experiences. How they made instructional decisions based on their interactions with student assessment data, the external literacy consultant, administration, and students is complex and reflects a constructivist epistemology.

In terms of analysis, the interpretive theoretical perspective provided a framework for understanding the ways in which teachers interpreted and constructed meaning around the

student assessment data that they collected and analyzed and the literacy practices they used in their classrooms. Specifically, this research is interested in discovering how an external literacy consultant supported teachers in collecting and analyzing student assessment data and how the data, if at all, informed literacy practices for elementary school students in a small, urban school. The interpretive tradition emphasizes the examination of a social setting through inquiry rather than imposing predisposed assumptions and theories on a context. A major component within interpretivism is the role of the researcher in understanding how participants construct meaning of a situation or interaction. Thus, the researcher is an instrument in understanding how participants perceive their experiences. The strategy is inductive, and the outcome is descriptive (Merriam, 2002). In general, the interpretive approach involves researchers immersing themselves in the natural setting that their study participants inhabit rather than beginning with a theory or preconceived idea of how the social players work together to construct, modify, and interpret their social reality (Esterberg, 2002).

Qualitative Case Study Methodology

This section provides an overview of case study research, defines case study methodology, and examines the usefulness of a case study research design for addressing this study's research questions. Although there are several prominent case study researchers who have written about case study research, for the purpose of this dissertation, I will rely mostly on the extensive scholarly works of modern case study methodologists Robert K. Yin, Robert E. Stake, and Sharon B. Merriam.

Stake (1995) described case study methodology as a strategy of inquiry in which the research explores in-depth a program, event, activity, process, or one or more individuals. To this end, qualitative case study methodology is appropriate for the study because the research questions require an in-depth examination of a complex learning environment. In this case, the

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learning environment consists of coaching activities and a professional learning community of teachers involved with literacy instruction. The study explored teachers' data-use practices in the context of a professional learning community and one-on-one coaching activities and, ultimately, the myriad factors influencing teachers' adoption and application of data-driven instructional choices in the classroom.

According to Yin (2003, 2014), case studies are the preferred approach when "how" and "why" questions are posed. Yin additionally claimed a qualitative case study approach is well-suited for examining contextual conditions that appear relevant to the phenomenon being studied, literacy teachers' data-driven decision making. In this instance, the urban school context and the social context in which literacy teachers engage with, analyze, and interpret student data and build their pedagogical knowledge around literacy instruction is particularly important. It is in these settings, coaching activities and the professional learning community, that data-driven instructional decision-making skills are developed and practiced.

A qualitative approach allows the researcher to explore phenomena such as feelings and thought processes that are typically difficult to ascertain through conventional research methods (Strauss & Corbin, 1998). Qualitative methods emphasize the researcher's role as an active participant in the study. For the present study, the researcher will be instrumental in the collection, interpretation, and analysis of data. Ultimately, the intention is to explore and seek to understand participants' beliefs, attitudes, and perceptions of their current and potentially changing data-use and literacy practices in the school and their respective classrooms.

Unit of Analysis

Stake (1995) defined a case as a specific, integrated, bounded system that becomes the unit of analysis. Cases are bounded by time, place, and activity, and researchers collect detailed information using various data collection methods over a sustained period of time. In an effort to

narrow the scope of research, case boundaries will be established to indicate what will and will not be studied (Miles & Huberman, 1994; Stake, 1995; Yin, 2014). For the present study, the unit of analysis will be a three-year professional development program focusing on data-driven instructional decision making for literacy teachers at an under-performing elementary school in Washington, D.C. A single case study design will be used to explore literacy teachers' participation in various professional learning opportunities, including one-on-one coaching activities with an external literacy consultant and a data-centered professional learning community aimed at building teachers' data-use capacity and improving literacy instructional practice.

Socio-Political Context of District of Columbia Public Schools

In 2011, a National Research Council report on District of Columbia Public Schools (DCPS) ranked student test score averages in the city below almost every other major city from 2003 onward. According to the National Assessment for Educational Progress (NAEP), only 8 percent of the districts' eighth graders were proficient in math and only 12 percent were proficient in reading (NCES, 2011). In sharp contrast, Chancellor Michelle Rhee found 95 percent of DCPS educators were "meeting expectations" based on the performance evaluations she examined when she was hired to reform the district's public school system. During Rhee's chancellorship, she put in place neoliberal reform agenda aimed at instilling accountability and improving principal and teacher quality.

> Turning the ship would require strategies that had never been tried before in D.C. It was clear that those strategies would generate significant pushback, especially from those with a vested interest in the status quo, and in a system that had zero accountability in place (Rhee, 2012, p. 40).

Michelle Rhee's previous position as the founder and leader of The New Teacher Project (TNTP) established alternative teacher certification programs with urban school districts,

including Baltimore, New Orleans, New York City, and Washington, DC. This work, which mainly focused on strengthening the teacher workforce in major cities by privatizing teacher preparation, helped cement her blueprint for creating a culture of accountability in DCPS based on high-stakes testing and teacher and leader performance evaluations. During Michelle Rhee's first year as chancellor, her leadership team channeled their efforts on disrupting the central office and dismissing school leadership who appeared ineffective. According to a 2014 Mathematica study, 39 percent of DCPS's 131 school principals left the district at the end of the 2007–2008 school year. In the subsequent year, 22 percent of school leadership left the system.

Next, Rhee's leadership team focused their attention on improving teacher quality by building and rolling out a robust evaluation system intended to accurately assess teacher performance in the district. Eventually, the new IMPACT evaluation system would cover all 7,000 school-based staff, from custodians and aides to teachers and principals. It marked a new era of accountability in DCPS that rewarded teachers based on performance rather than seniority. To ensure IMPACT focused on what mattered most—high-impact instruction—Rhee's leadership team developed a new Teaching and Learning Framework for DCPS, comprised of nine instructional practice standards. The IMPACT teacher evaluation system was based on classroom observations, student achievement data, and other pertinent information about the teachers' professional practice. Union leaders and educators commonly critiqued the new teacher evaluation system as being too complicated while others thought the rating system was overly simplistic and too blunt of an instrument to capture the full range of instructional practices and interactions teachers enact each day. "There are hundreds of human capital questions you need to answer to effectively run a school district, and now, for the first time, we have the data to answer

them," remarked Jason Kamras, Director of Human Capital for Teachers, a new role within the newly formed human capital department (McGrummen, 2011, p. 5).

Along with the new teacher evaluation system, Chancellor Rhee brokered a new agreement with the Washington Teachers Union to include performance-based compensation for the first time for teachers. Teachers rated "Highly Effective" were eligible for higher compensation as well as significant bonuses while teachers rated "Minimally Effective" would receive no salary increase. Teachers receiving "Minimally Effective" or "Ineffective" ratings for two consecutive years would be terminated from DCPS. In summary, Michelle Rhee and her leadership team actualized a neoliberal agenda by implementing radical and swift changes to DCPS's human capital policies and structures around teacher and leader recruitment, selection, evaluation, development, compensation, and retention, with the ultimate goal of increasing student achievement as measured by standardized tests. From 2007 to 2014, math proficiency scores in DCPS rose 23 percentage points and reading scores rose 13 percentage points. The district's students made larger performance gains than their peers in any other state in the NAEP assessments.

Research Site

Fortunately, there were no barriers to identifying and accessing a research site to conduct this study. The researcher had a school contact who was involved with coordinating and delivering professional development to literacy teachers as part of the Target Literacy Grant. The researcher knew the external literacy consultant in a professional capacity—they had previously worked together as special education teachers. Gaining access to the school was achieved by meeting with the building-level administrator, who granted permission, and coordinating with the external literacy consultant to observe one-on-one coaching sessions with teachers, professional learning communities focused on collaborative data use, and classroom literacy

instruction. In addition, the external literacy consultant assisted with arranging teacher interview schedules. Because the nature of the study was to determine how literacy teachers improve their instructional practice and their collaborative data use, the school administrator and the participating teachers were interested in the study results.

The Target Corporation lists as its corporate giving and philanthropic work a partnership with America's Promise Alliance (APA), an education organization founded and led by General Colin and Mrs. Alma Powell. Target sponsored America's Promise's annual graduation report, *Building a GradNation*, and a companion study titled *Don't Call Them Dropouts*, focused on raising the nation's high school graduation rates. According to Target's corporate responsibility report, "a child who can't read proficiently by the end of third grade is four times more likely to drop out of high school than a child who can. As part of Target's commitment to education, we're working to help more kids become better readers and stay on the path to graduation" (Target, 2013, p. 1). In 2010, the Target Corporation committed to give $1 billion for education improvement initiatives by the end of 2015 citing the following reasons:

1) Target consumers indicated education was their primary social concern,
2) To help address America's dropout crisis, in which one-third of African American and Latino students did not graduate on time and one-fourth of students did not graduate high school, and
3) To help create an educated workforce of future leaders, ensuring the country's global competitiveness.

In 2011, the Target Corporation first piloted a literacy program in six elementary schools in Minneapolis, MN, which marked the beginning of the company's work on "personalized literacy programs" and laid the groundwork to launch literacy pilot programs in Los Angeles and Washington, DC.

The purpose of the Target Literacy Grant was to increase students' reading proficiency. In spring 2012, the District of Columbia Public Schools (DCPS) was one of two school districts

across the country to receive this multi-million-dollar grant from Target Corporation for the Targeted Literacy Initiative (TLI). The Targeted Literacy Initiative was a three-year grant program designed to improve literacy instruction and expand literacy coaching and resources. The three-year grant was split among six DCPS elementary schools and funds were used to hire external literacy consultants to build teachers' data-use capacity, improve the use of interim assessments to guide instruction, and help teachers use data management technology to access timely and disaggregated student data (DCPS Press Release, 2012).

External literacy consultants were a main component of the TLI grant and were employed and managed by Amplify to work on-site at a designated school. Specific coaching practices that the external literacy consultant was responsible for included:

- *Co-planning* literacy instruction in response to data;
- *Co-teaching* and *modeling* exemplary literacy instruction;
- *Observing literacy instruction* in classrooms;
- Serving as a *reflective thought-partner* before, during, and after literacy instruction; and
- *Developing and delivering meaningful and sequenced professional development* to build teachers' instructional practices and data-use capacity based on literacy needs.

Additionally, literacy consultants played an integral role in the school leadership team and worked to develop collaborative working relationships with teachers and the school community. Overall, the objective of the TLI grant was to change teachers' data-use practices and prepare teachers to make appropriate instructional responses to student assessment data that will ultimately improve student literacy.

An integral component of improving literacy instruction in the school was building teachers' capacity to understand and use benchmark assessment data to drive instructional change in the classroom. The external literacy consultant hired had experience working with teachers and students in urban education, expertise in teaching reading, and knowledge of using

student data to drive education improvements. The literacy consultant led professional learning

communities called Collaborative Learning Cycles (CLC) focused on guided reading, close

reading, and developing literacy lesson plans with teachers during collaborative learning

sessions. These professional development topics aligned with the coaching support that literacy

consultants provided teachers, which also focused on guided reading, small-group instruction,

literacy work stations, shared reading, interactive read-alouds, and developing literacy lesson

plans for a 120-minute literacy block. Over a three-year timeframe, the external literacy

consultant focused solely on developing a data-literate faculty and expanding the instructional

repertoires of literacy teachers in the school.

Table 1. 2013–2014 Demographic Characteristics of the Student Population

	Number	Percentage
Total Population	280	
Ethnicity		
Black students	194	69%
Latino/a students	60	21%
White students	19	6%
Asian students	3	1%
Multi-racial students	4	1%
Special Education	70	25%
English Language Learners	34	12%
Free/Reduced Lunch	276	99%

Implementation plans for Year 3 of the TLI grant included effective orientation of new

teachers to the TLI program due to teacher turnover, building teacher capacity and leadership

skills to sustain the literacy initiative, developing resource materials and a repository to house

data collection information, and implementing Collaborative Learning Cycles with the teachers.

A key element of succession planning for when the TLI grant ends was identifying and supporting teacher leaders to assume responsibility for planning and leading the CLCs after the external literacy consultant departed the school.

Based on the 2013–14 DCPS School Scorecard, the grade levels in the school range from pre-kindergarten to fifth grade with approximately 280 students enrolled in the school. As shown in Table 1, the average core class size was approximately 15 students. The student population was 69% Black, 21% Latino/a, 6% White, 1% Asian, and 1% multi-racial. The school received Title I funds and 99% of the students qualified for free and reduced-price lunch. English Language Learners made up 12% of the student body. Twenty-five percent of the students received special education services (2013–14 DCPS School Scorecard).

According to the 2013–14 Elementary and Secondary Education Act classification, the school received a Focus classification. Focus schools need targeted support to address large subgroup gaps relative to all schools in Washington, DC (2013–14 DCPS School Scorecard). The DC Comprehensive Assessment System (DC CAS) is designed to measure the academic proficiency of DC students relative to their mastery of the DC Content Standards. The 2013–2014 student performance data for the school indicated that 38% of students scored Below Basic, 38% of students scored Basic, 23% of students scored Proficient, and 1% of students scored Advanced on the DC CAS Reading subtest. Based in the DC CAS Reading student proficiency levels by subgroup, 46% of Black students scored Below Basic, 30% of Black students scored Basic, 23% of Black students scored Proficient, and 2% of Black students scored Advanced.

Participants

The selection of teacher participants reflected purposive sampling. Maxwell (2005) defined purposeful selection as a strategy in which particular settings, persons, or activities are selected intentionally to provide information that cannot be obtained as well from other selection

strategies. The participants in this study include all 15 elementary school teachers, ranging from kindergarten to fifth grade, responsible for providing literacy instruction. Additional participants included the external literacy consultant, literacy coach, and principal. Selecting the principal, external literacy consultant, and literacy coach to be interviewed for this study was purposeful in that they were instructional leaders in the school and were involved in supporting teachers with strategies and techniques for improving literacy instruction. In total, 18 participants were recruited for the study.

Before proceeding with any observations and interactions with the school staff, the external literacy consultant introduced the researcher to the faculty and briefly explained her presence during future collaborative meetings. This introduction allowed her to further articulate her research interest in the school's data-use activities and share background information about her previous teaching experience in the city and ongoing doctoral work. The participants were given an informed consent letter, which outlined the goals and objectives of the study. Before individuals agreed to participate in the research, they had an opportunity to ask any clarifying questions about the research methods used and if the findings would be shared with them. Observations of the professional learning communities allowed the participants to grow familiar with the researcher before the interviews and observation of one-on-one coaching sessions commenced.

Teachers

The 15 elementary school teachers participated in a tightly structured, data-centered professional learning community every Wednesday morning for 35 minutes. The participating teachers included the grade-level general education teachers, special education teachers, English Language Learner teachers, music teacher, and Spanish teacher (refer to Table 2). The teachers represented a cross-section of veteran and beginning teachers ranging from 1 year to over 25

years of teaching experience. However, most of the teachers were new to teaching and recently

completed a traditional preparation program or an alternative certification program. However,

some new teachers were hired on a provisional license and had limited or no teacher training

before entering the profession.

Table 2. Teachers by Grade Level for the 2014–2015 School Year

Position	No. of Staff
Kindergarten Teacher(s)	2
Kindergarten Special Education Teacher(s) *(Inclusion)*	1
First Grade Teacher(s)	1
Second Grade Teacher(s)	2
First and Second Special Education Teacher(s) *(Inclusion)*	1
Third Grade Teacher(s)	1
Fourth Grade Teacher(s)	1
Third and Fourth Grade English Language Learner Teacher(s) *(Inclusion)*	2
Fifth Grade Teacher(s)	1
Third, Fourth, and Fifth Grade Special Education Teacher(s) *(Self-contained)*	1
Music Teacher	1
Spanish Teacher	1

External Literacy Consultant

As part of the Target Literacy Grant, a full-time external literacy consultant, Sarah, was

assigned to the school for the duration of the grant. Sarah was a special education teacher for

seven years in Washington, DC, before she became an instructional coach. She has worked as an

instructional coach for five years, and she was employed by Amplify, an organization that

specializes in data use services and professional learning opportunities. This was her third year

as an external literacy consultant at the school.

Over the course of the three-year grant, Sarah facilitated a data-centered professional learning community, led sections of all-staff professional development days, provided one-on-one coaching activities to teachers responsible for literacy instruction, coordinated student assessments, and managed the school's literacy materials and resources. She led weekly Collaborative Learning Cycle (CLC) meetings that focused on helping teachers implement effective small-group literacy instruction—literacy stations, Guided Reading, and reading interventions. In addition, Sarah was responsible for training teachers to administer, analyze, and interpret various classroom literacy assessments for progress monitoring, such as the Dynamic Indicators of Basic Early Literacy Skills (DIEBELS Next), Text Reading Comprehension (TRC), and Running Records. During the CLC meetings, she facilitated data conversations, which allowed teachers to articulate their interpretation of student data and make connections between student learning, classroom context, and teachers' instructional practice.

To extend teacher learning beyond the professional learning community, Sarah offered individual coaching to teachers. The coaching activities consisted of *observing* teachers' literacy instruction in the classroom, *providing feedback* and *sharing expertise* to assist in teacher learning, *modeling* literacy instruction in the classroom, *demonstrating data analysis* so that teachers can observe how it is successfully employed, engaging in *dialogue and questioning* with teachers, *co-teaching* a literacy lesson or *co-planning* a literacy lesson or unit with teachers, and determining appropriate *instructional responses* to student data. The type and frequency of coach-teacher interactions varied based on the teacher's strengths and weaknesses around data use and small-group literacy instruction.

Sarah worked in collaboration with the principal to assess faculty learning needs as they pertained to building data literacy and improving small-group literacy instruction within the

school. On average, Sarah met weekly with the principal to debrief and discuss the progress and pitfalls of the CLC meetings and various coaching activities. She also met with the principal to review and discuss student assessment data at the student, classroom, and school level. Together, they determined the objectives, goals, and composition of the professional learning community for eight-week inquiry cycles, which the school called a CLC. Sarah also met with an Amplify Instructional Coach Manager who provided feedback, resources, and support to external literacy consultants involved with the DCPS Target Literacy Grant.

Principal

Cory has been the school principal since 2012 and has a long history with DCPS; he attended DCPS schools himself, and his mother was a DCPS educator. Prior to his principalship, he taught in DCPS schools for several years, served as an assistant principal, and completed the New Leaders for New Schools program to become a principal.

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Data Collection

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A hallmark of case study research is the detailed and in-depth data collection involving multiple sources of evidence, which ensures that the study is as robust as possible (Creswell, 2007; Patton, 1990; Yin, 2003). This study will use in-depth interviews of participants, document review, and observation to collect appropriate data in support of addressing the research questions. To ensure the emerging themes and findings are consistent and representative of the phenomenon being explored, a multifaceted approach to data collection and analysis will be used to support data triangulation and enhance data credibility. In a case study, it is important to converge sources of data as a way to ensure results reflect participants' understanding as accurately as possible. Yin (2003) and Stake (2000) agree that triangulation is essential to developing reliable case study findings. NVivo qualitative data analysis software will serve as a

central repository for all information collected. Table 3 provides an outline of the research

questions, data sources, data collection activities, and the data analysis procedures.

Table 3. Data Collection and Analysis Overview

Research Questions	Data Source	Data Collection	Data Analysis
RQ1. How did teachers perceive student assessment after participating in a coaching project that focused on data-driven instruction in an underperforming urban elementary school?	Teachers Literacy Consultant Principal Relevant Literature	Interviews Field Notes	Thematic Coding QSR Nvivo 10
RQ2. How did a PLC focused on data-driven literacy instruction influence teachers' perceptions of literacy practices in an urban underperforming school?	Teachers Literacy Consultant Principal Relevant Literature	Interviews Field Notes	Thematic Coding QSR Nvivo 10
RQ3. How did teacher coaching provided by an external literacy consultant influence teachers' perceptions of literacy instruction in an urban underperforming school?	Teachers Literacy Consultant Principal Relevant Literature	Interviews Field Notes	Thematic Coding QSR Nvivo 10

Responsive Interviews

Multiple sources of data allow case study researchers to use thick description to create a

story. The researcher intends to construct a story that honors the participants' meaning-making

experience. Similarly, Seidman (1991) supported this same line of thinking by claiming that

interviews help people tell their stories. Based on the research questions being explored,

interviews will serve as the primary data collection vehicle. Participant observation and

document collection will be used to enrich and thicken the interview data.

Responsive interviews, an in-depth interviewing approach, were used with participants to explore research questions. According to Rubin and Rubin (2011), a responsive interviewing technique relies heavily on the interpretive constructionist philosophy, which aims to find out how people perceive an event and, most important, the meaning they attribute to it. This approach allows for a flexible interview process. This interviewing technique is not used to reach definitive answers or truth but rather to learn how the study participants understand what they have seen, heard, or experienced within the context of a professional learning community and coaching interactions as it pertains to data-driven decision making.

Interviews were conducted using a semi-structured interview protocol. Benefits of using a responsive interviewing technique included the fine-tuning of semi-structured interview protocols based on what was learned from previous interviews and through direct observation. Interview questions were developed based on preliminary observations of the professional learning community and literature review. The interview guide was structured to move from the general to the specific via five main sections: opening, introduction, transition, open-ended questions, and conclusion (Kruegar & Casey, 2000). Three types of questions were asked: main questions, follow-up questions, and probes. The main questions were designed to map on to the research problem and the follow-up questions and probes ensured that depth, detail, vividness, richness, and nuance were captured (Rubin & Rubin, 2011).

The interviews were held in teachers' classrooms and ranged from 30 to 60 minutes in duration. The interviews were conducted privately and face-to-face. Limiting distractions during the interview helped the researcher engage with participants, making them feel more at ease, and allowed for active listening. Before commencing with the interview, the researcher reviewed the informed consent with the teachers and addressed any questions about the study and how

anonymity and confidentiality would be protected. Participants were given a hard copy of the interview guide and an opportunity to peruse the interview questions. This allowed participants to gather any initial, relevant thoughts or responses they could share regarding the interview questions. During the interview, participants referred to the questions as they were being asked, which minimized having to repeat questions. Once the participant agreed to be recorded and signed the informed consent, the interview questions were asked in sequential order. However, participants could refuse to respond to any question, discontinue the interview, or ask for further explanation of any question that seemed unclear.

All interviews were audiotaped and transcribed verbatim, and the transcript was shared with the participant to make any changes or clarifications to the transcripts. Using audiotape ensured participants' responses were captured accurately and relieved the researcher from taking copious notes. Verification of the participants' responses was completed via e-mail communication. Through this confirmation process, the construct validity of the qualitative research was enhanced. It was hoped that through observation of the professional learning community prior to the interviews rapport was developed with the participants in an effort to yield rich information (Stake, 1995). By helping participants feel comfortable with the research process, "social desirability responses" during the interviews were potentially lessened (Krefting, 1991).

It is important to note that the data collection process included approval from both the researcher's dissertation committee and The University of North Carolina at Chapel Hill's Institute Review Board (IRB). In addition, participants completed informed consent documents before conducting interviews. Pseudonyms were used to protect the identity of participants, which potentially aided their willingness to be candid with their responses.

Observation

Little (2012) asserted that methodological approaches to studying data-use practices in schools suffer from an overreliance on interviews, surveys, and self-report logs and a paucity of high-quality observational analyses. Hence, a strategic use of methods that capture the detail, nuance, and patterns of on-the-ground social interactions involving teachers' data-use practice is needed. Observation allows researchers to learn about the activities of the people under study in the natural setting through observing in those activities (DeWalt & DeWalt, 2002). A systematic and careful examination of the teachers' collaborative data use within the professional learning community was conducted through observation. According to DeWalt and DeWalt (2002), participant observation occurs when the researcher is at the scene of action, is identifiable as a researcher but does not actively participate in the activity, and peripherally interacts, on occasion, with people in the activity. Prolonged exposure to the professional learning community and the teachers engaged in this social context supported the gathering of naturalistic data. Furthermore, it lent itself to understanding the contextual factors, varied experiences, and multiple perspectives of the participants around their collaborative inquiry and their instructional responses to student literacy data.

An observation protocol was used to identify important areas to attend to, such as collaborative meeting norms, objectives for professional learning, and group activities, which helped organize field notes. Of particular importance is noting the quality and closeness of interactions in collaborative settings, including professional learning communities and coaching sessions. The observation protocol allowed brief descriptions of conversations, interactions, and participants' behavior to be captured (Lodico, Spaulding, & Voegtle, 2010). An observation protocol was developed to collect the following background information: date, time, location, setting, participants, activities, and objectives for each professional learning community (PLC)

meeting observed. In addition, broad themes were identified along with behaviors and interactions among the teachers and between the teachers and the literacy consultant. Although observations of the PLC were not audio- or videotaped, an effort was made to capture participants' comments, mood, and questions. The observation protocol included a reflection section to record the researcher's initial thoughts and questions about teacher participation, relationships, resources used during the PLC meeting, and the facilitation of collaborative inquiry. Field notes gathered using the observation protocol were used to develop initial interview questions.

Teacher PLC meetings facilitated by the external literacy consultant were intentionally selected for observation, because they focused on teachers' collaborative data use and how the literacy consultant supported the teachers' opportunity and capacity to engage in data-driven decision making. In total, three PLC meetings and two professional development days for teachers were observed. The PLC meetings were typically 30 to 40 minutes in length and occurred weekly during an eight-week CLC. The objectives and goals of CLCs shifted depending on the literacy focus, student assessment data, teacher learning needs, progress monitoring and benchmark assessment schedules, and principal input. In some instances, the PLC meeting included all of the teachers (n=15) and was led mainly by the external literacy consultant. In other instances, teachers were split based on their experience implementing the school's Guided Reading program or their familiarity using various interim assessments. Teachers who have worked extensively with the external literacy consultant in the previous two years of the Target Literacy Grant to implement Guided Reading (n=9) were assigned to the literacy coach during the final year of the grant. During the last year at the school, the external

literacy consultant met with teachers (n=7) who had less experience with teaching Guided Reading and who were less familiar with using various interim assessments.

Additionally, the study included shadowing the external literacy consultant in the context of the classroom and her coaching sessions with three teachers. These teachers were purposely selected to have their classroom literacy instruction observed because the external literacy consultant and principal identified them as needing additional coaching support in the area of using to student data to inform small-group literacy instruction, developing and implementing literacy work stations aligned with student learning needs, and creating well-developed literacy lesson plans. Although these teachers were identified as needing continued support with using student assessment data to inform instructional decision making and implementing effective literacy practices, they varied regarding to the grades they taught, years of teaching experience, and number of years at the school. Each teacher was observed twice for a total of six classroom observations. The classroom observations were scheduled during literacy instruction and ranged from 20 to 30 minutes in length and coaching sessions between the external literacy consultant and teacher occurred the same day. Below is a table of classroom observations and coaching sessions.

Table 4. Classroom Observations and Coaching

Teacher	Grade	Number of Students	Number of Classroom Observations	Number of Coaching Sessions Observed
Abby	First Grade	14	2	2
Ruder	Second Grade	13	2	2
Cline	Fifth Grade	12	2	2

To gain a deeper insight into literacy coaching, the researcher shadowed the literacy coach during her scheduled coaching time, took detailed field notes, and recorded the observed one-on-one coaching session with select teachers. During the coaching observations, the researcher took the role of observer-as-participant, identifying herself as a researcher and using professional judgement about when to interact with students and teachers in their classroom environment (Bogdan & Biklen, 1998). On occasion, spontaneous informal unstructured interviews with the literacy consultant occurred with the intended purpose of clarifying or expanding on what was observed.

An observation protocol was used for classroom observations and coaching sessions, which were both audiotaped. The observation protocol helped with taking high-quality field notes to supplement audiotaping. After the classroom observations and coaching sessions were completed, the audio recordings were transcribed. In an attempt to strengthen trustworthiness, multiple sources of evidence were used for triangulation and participants reviewed audio transcriptions of the classroom observations and coaching sessions (Yin, 2009). According to Yin (2009), employing multiple sources of evidence can contribute to the validity of data collection by providing multiple measures of the same phenomenon, which, in this case, were literacy consultant's coaching practices and interactions with teachers. To enhance the accuracy of the audio transcription, participants were given the opportunity to make any changes or corrections to the transcripts. However, by the end of the shadowing period of coaching sessions, the researcher realized that data collected did not reach saturation—observations continued to yield new data (Flick, 2006). Unfortunately, due to time constraints of the TLI grant, no additional observations of classroom literacy instruction and one-on-one coaching sessions with teachers were possible. Once the dissertation is complete, the report will be shared with

participants to have them verify that interpretations of the data collected and analyzed are accurate and provide feedback about the research process.

Researcher Positionality

My stance as researcher most strongly relates to a social constructivist approach, which recognizes the importance of human creation of meaning and perceptions of reality. My experience as a researcher is largely influenced by my experiences as a teacher. I entered the teaching profession as a special education teacher through an alternative certification program, DC Teaching Fellows. The program recruited career-changers and individuals new to the field of education to work in high-poverty, low-achieving schools. Similar to the participants in this study, I was an elementary school teacher in Washington, DC, for six years. This research stems from my K-12 teaching career, professional learning experiences as a teacher, and recent work in teacher education. These experiences were catalysts for the study and framed my positionality on teachers' professional learning opportunities and data-driven decision making. Scholarly literature and my professional experiences formed the foundation for this study and, through this prism, I intended to study the potential shifts in pedagogical practice that emerged from collaborative data use and literacy knowledge development associated with coaching activities led by a literacy consultant.

As a researcher, I understand that research is not neutral and that my experiences and perspectives will influence my interactions with participants and my interpretations of data. Charmaz (2008) claims objectivist approaches mainly differ from constructivist approaches in that they "assume a single reality that a passive, neutral observer discovers through value-free inquiry. Assumptions of objectivity and neutrality make data selection, collection, and representation unproblematic; they become givens, rather than constructions that occur during the research process, and they shape its outcome. A naive empiricism results" (p. 401).

Although the accomplished studies that were examined for the literature review shaped my background knowledge of various factors influencing teachers' professional learning and data literacy, I tried to avoid preconceived theoretical assumptions during data collection and embraced a "theoretical sensitivity" (Glaser & Holton, 2004, p. 43). This means, as the researcher, I tried to be "sensitive" or aware of data that are most pertinent to addressing my research questions. This process involved the ability to give meaning to data, the capacity to understand and make linkages between emerging themes, and the ability to discern which data addressed my research questions. Ultimately, the literature review, data collection and analysis, and my positionality worked in tandem, contributing to my theoretical sensitivity.

Role of the Researcher

I secured an elementary school for the study through a connection I had with the external literacy consultant. Before pursuing my doctoral degree, the external literacy consultant and I worked together as special education teachers in the city and we maintained a close friendship over the years. After learning about my research interests, the external literacy consultant invited me to observe several PLC meetings at her school in spring 2014. These informal observations helped me determine if the school was a suitable case for my research, and I was able to narrow my research questions.

Although I planned to interact with participants to build rapport, my researcher role was known and my engagement with participants was curtailed. On one hand, due to my relationship with the external literacy consultant, my interactions with her were closely governed to avoid potentially influencing, positively or negatively. Ultimately, I did not want to influence her perspectives and relationships with the teachers. On the other hand, participants who were aware of my relationship with the literacy consultant could have been dubious of my objectivity or neutrality. Consequently, I tried to gain the confidence of teachers before interviews were

scheduled with them to ensure that the information they shared with me and their anonymity would be protected.

Because an evaluation of the Target Literacy Grant was being conducted by an external evaluator, participants may have been wary of additional research activity and further imposition. I attempted to be respectful of participants' time and demonstrate gratitude for their involvement in the study. To relate with the teachers, I shared my professional history with them. Even though I was an "outsider" to their school community, I hoped my previous experience as a teacher in Washington, DC, and a current resident of the district would help build trust.

Data Analysis

The interviews with teachers, external literacy consultant, and principal generated data about the perceptions of student data use, student assessments, and the role and impact of literacy coaching in the school, and the observation field notes provided complementary data to the interviews. The constructivist approach seeks to find common patterns of meaning through preliminary and thematic analysis with a major focus on in-depth understanding of the phenomenon and identifying the contextual factors that contribute to the phenomenon being studied (Grbich, 2007). Data analysis, through the lens of constructivism, included descriptive coding of interview transcripts, relevant documents, and field notes collected from observation, which helped me answer the research questions. While moving between and within the steps of data collection and analysis—which occurred concurrently—the research questions and the study's purpose were at the forefront of my mind. While analyzing the data, I used several layers of coding to explain the factors influencing literacy teachers' data use and instructional practice.

Data analysis involved the use of NVivo qualitative data analysis software. NVivo is a tool to systematically organize and manage data. According to Bazeley (2007), NVivo supports the analysis of qualitative data by providing rapid access to conceptual knowledge as well as the

data that supports it while at the same time retaining access to the context from which those data have derived.

As illustrated in Table 3, data analysis was conducted within each data collection strategy and across data sources. In an effort to ensure that each data source was not treated as a separate piece of the puzzle, the various strands of data were woven together to better understand the case. Teacher interviews were analyzed in conjunction with field notes and collected documents. To corroborate the data during data analysis, different data sources were triangulated to allow for cross-checking of data.

During data analysis, a constant comparative method was used, continually comparing data to discern commonalities and differences between the participants to understand each individual's role in the study (Corbin & Strauss, 2008). To better illuminate the case, individual teachers were analyzed as sub-units. Thus, teachers participating in the PLC and coaching activities were viewed separately and comparatively. Individual teachers were used to develop cross-case comparisons for understanding how teachers use student data to make instructional decisions and how teachers' engagement and interaction with the external literacy consultant impacted their data use and literacy practices.

Coding. Data coding was used as an analytic tool to manage the large amount of raw data collected from interviews, observations, and documents. During the data coding process, data were broken down into smaller chunks of information, constantly compared, and grouped in categories based on commonalities (Walker & Myrick, 2006). In the first stage of coding, *open coding*, data was segmented into initial categories. To do so, relevant words and phrases were identified and labeled with a theme, paying close attention to respondents' beliefs and perceptions about student assessment data, collaborative data use, coaching interactions, and

literacy practices in the school (Charmaz, 2008). Once the data were classified into thematic

categories, memos were used to construct an emergent concept or theory during data analysis.

During the second stage of coding, *axial coding,* hypothetical relationships between the major

categories and their corresponding subcategories were built. Using axial coding, cross-case

analysis was conducted to discern how the codes developed for each case are connected to one

another. The final stage of coding, *selective coding*, involved interpreting the interconnections

that emerged among categories formed in axial coding. As a result, certain factors were

investigated that influenced the teachers' uptake of data-driven literacy practices in their

classrooms and how particular strategies, such as coaching and professional learning

communities, led to certain outcomes.

As the sole researcher and the main instrument in qualitative research (Patton, 2014),

efforts were made to limit researcher bias. To this end, steps were taken to remain consciously

aware of my personal biases and how my subjectivity may have impacted my data collection and

analysis (Peshkin, 1988). Using an observation protocol, descriptive field notes were collected,

which included both descriptions of observations as well as personal thoughts, reactions, and

feelings to what was being observed. Although a researcher's journal was not used, the personal

thoughts and comments that were collected during observations and interviews helped me

explore and check my judgements about the data as well as my role as the researcher. Though

complete neutrality and objectivity may be impossible, maintaining a non-evaluative or

nonjudgmental position toward the themes, content, and conclusions that emerged during coding

and data analysis was prioritized (Patton, 2014). Furthermore, the social desirability bias

decreased as a result of the rapport developed with participants over time.

Limitations

There are some potential limitations associated with qualitative research that may have affected the study. These limitations included recruiting and maintaining consistent participant involvement, a small sample size, and potential closeness with the data that may have clouded objectivity. Moreover, the study depended heavily on self-reported data in the form of interviews.

Depth of analysis is one of the primary virtues of the case study method (Gerring, 2004). According to Stake (1995), naturalistic generalization is a process where readers gain insight by reflecting on the extensive details and in-depth descriptions of a complex social phenomenon presented in a case study and then determining if details from a case warrant generalizations based on other similar experiences, situations, and/or cases. In this sense, naturalistic generalization helps readers apply ideas from natural and in-depth depictions presented in a case study to personal contexts, allowing transferability. Ultimately, transferability relies on the context-dependent judgement of "fit" between two or more cases. Thick, rich description was used to support the potential transferability from this case study to similar cases and contexts (Lincoln & Guba, 1985).

To increase the trustworthiness of the study, multiple data collection methods and multiple data sources were employed. Although the data used to answer the research questions were acquired mainly from participant interviews, information from observations, documents, and artifacts gathered from the data collection process support the data from interviews through triangulation (Patton, 2014). The triangulation of data sources and data collection methods allowed for the cross-checking of information from various dimensions. The interpretive constructivist philosophy recognizes the subjectivity of each participant and the inter-subjectivity, shared understanding, among the teachers and between the respondents and the

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researcher. Additionally, member checking of transcripts from participant interviews and coaching sessions helped corroborate the information that was collected. Ultimately, this verification process enhanced the credibility and quality of the case study as well as identifying a range of participant perspectives.

Although studies that use a similar methodology and data collection methods faced similar limitations, many of these factors were mitigated or negated. For instance, to gain and retain teacher participation, I was forthcoming about my research objectives and continually emphasized the potential significance of the research findings to the fields of teacher and urban education. A limitation to using convenient sampling is the potential risk that some participants may be unwilling to talk with me and share their experiences with collaborative data use to drive their literacy instruction. However, all the subjects were willing participants in the data collection process.

Another limitation related to the study's data collection was a restricted timeframe. The Target Literacy Grant was a three-year program, so the window to collect the data in relation to the ongoing work and coaching activities led by the external literacy consultant within the school was constrained. The timespan to collect data was within an eight-week coaching cycle, which limited understanding of how the participants' data-use practices and the coaching and professional learning communities evolved over time within the school. This meant gauging the sustainability and spread of collaborative data use to inform literacy practices within the school after the grant concluded was not included in the study. The study attempted to offer some insight into the role of collaborative data use within an urban school and how a literacy coach can support the data-driven instructional practices of literacy teachers working with minority students.

CHAPTER 4. RESEARCH FINDINGS

Qualitative methods were used to describe the elementary teachers' perceptions of student assessment, data use, and literacy practices after participating in a three-year professional development project involving instructional coaching. Data from the interviews with elementary teachers, school principal, literacy coach, and literacy consultant were analyzed and summarized. Additionally, observation data captured as field notes from coaching sessions with select teachers, classroom observations, professional learning community (PLC) meetings, and professional development days and document review were used to enrich and confirm themes that emerged from the analysis of interviews. Field notes were reworked to construct meaningful and descriptive vignettes that provide evidence of the collaborative data use meetings and teacher coaching sessions led by the external literacy consultant.

The steps employed for the data analysis included a word-for-word transcription of each interview, which helped the researcher recall event details. Commonalities and key phrases between and among the participants were discovered through open coding. Relevant words and phrases were identified and labeled with a theme, paying close attention to the respondents' beliefs and perceptions about student assessment, literacy practices, collaborative data use, coaching interactions, and data use tools. During the second stage of coding, *axial coding,* hypothetical relationships between the major categories and their corresponding subcategories were built. Using axial coding, cross-case analysis was conducted to discern how the codes developed for each case were connected to one another. The final stage of coding, *selective coding*, involved interpreting the interconnections that emerged among categories formed in

axial coding. As a result, particular teacher development strategies, such as coaching and PLCs, were investigated to explore their influence on teachers' perceptions of student assessment, data use, and literacy practices. The following research questions were examined through an analysis of various data sources:

RQ1. How did teachers perceive student assessment after participating in a coaching project that focused on data-driven instruction in an underperforming urban elementary school?

RQ2. How did a PLC focused on data-driven literacy instruction influence teachers' perceptions of literacy practices in an urban underperforming school?

RQ3. How did teacher coaching provided by an external literacy consultant influence teachers' perceptions of literacy instruction in an urban underperforming school?

Table 5. Data Sources

Primary Data Sources	Total Number
Teacher Interviews	15
Principal Interview	1
Literacy Coach Interview	1
Literacy Consultant Interview	1
Field Notes from Classroom Observations	6
Field Notes from Coaching Sessions	6
Field Notes PLC and Professional Development Days Observations	5
Secondary Data Sources	Total Number
Document Review	12

Emerging Themes

Open coding was completed through repeated listening to and close re-readings and examination of the 18 recorded interviews. Nvivo qualitative data analysis software was used to code reoccurring and salient ideas and statements from the transcribed interviews. Common themes were derived from the overall experience of the group of teachers and from the external

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literacy consultant, literacy coach, and principal interviews, which provided compelling insights into the experiences of teachers participating in coaching activities. The themes are presented in order of magnitude as determined by the strength and frequency of statements provided by participants during interviews. The emerging themes are listed in the table below.

Extensive reporting of commentary is provided to develop the rich description of the participants' experiences and perceptions. The following is a description of the themes based on the experiences and beliefs of the participants, which may or may not match descriptions found in the literature, and select quotes of representative comments by participants.

Table 6. Research Questions and Themes

Research Questions	Emerging Themes
RQ1. How did teachers perceive student assessment after participating in a coaching project that focused on data-driven instruction in an underperforming urban elementary school?	1. Increased Focus on Student Literacy Assessment 2. Leadership's Expectations for Data Use
RQ2. How did a PLC focused on data-driven literacy instruction influence teachers' perceptions of literacy practices in an urban underperforming school?	1. Increased Use of Student Literacy Data 2. Improved Literacy Practices through Collaboration
RQ3. How did teacher coaching provided by an external literacy consultant influence teachers' perceptions of literacy instruction in an urban underperforming school?	1. Improved Approaches to Literacy Instruction 2. Teachers Attempt Suggested Instructional Changes 3. Emphasis on Small-Group Literacy 4. Leadership's Expectations for Literacy Practices

RQ1. How Did Literacy Teachers Perceive Student Assessment After Participating in a Coaching Project That Focused on Data-Driven Instruction in an Underperforming Urban Elementary School?

Description of School's Literacy Assessments

The reading benchmark assessments and progress monitoring assessments used for the TLI grant included the Dynamic Indicators of Basic Early Literacy Skills (DIBELS), which assesses students' early literacy skills, and the Text Reading and Comprehension (TRC) assessment, which measures students' ability to comprehend text in kindergarten through fifth grade. Both literacy assessments were housed in a Web-based data platform, mCLASS, which was managed by Amplify. Features of the mCLASS data platform included administration of the benchmark and progress monitoring assessments, access to benchmark and progress monitoring data, aggregate-level reporting and analysis, and secure data hosting and management. The external literacy consultant was employed by Amplify and deployed to the school for the duration of the three-year TLI grant.

The DIBELS reading assessment, now called Acadience Reading assessment, is a universal screening and progress monitoring assessment that measures the acquisition of early literacy skills from kindergarten through sixth grade. The assessment is comprised of six brief measures that function as indicators of the essential skills children must master for reading proficiency. Throughout the TLI implementation, DIBELS measures were used to regularly monitor the development of early literacy skills for the students in order to provide timely instructional support and prevent the occurrence of reading difficulties. The six measures that make up the DIBELS assessment are listed in Table 7.

Table 7. DIBELS Measures

DIBELS Measures	Grade Levels	Description of the Measure
Letter Naming Fluency (LNF)	Grade K – Grade 1	LNF is included for students in grades K and 1 as an indicator of risk. Unlike the other DIBELS measures, LNF does not measure a Basic Early Literacy Skill. Students are presented with a page of upper- and lower-case letters arranged in a random order and are asked to name as many letters as they can.
First Sound Fluency (FSF)	Grade K	FSF measures phonemic awareness skills in the beginning and middle of kindergarten. FSF measures how well a student can hear and produce the initial sounds in words.
Phoneme Segmentation Fluency (PSF)	Grade K – Grade 1	PSF measures phonological awareness. The PSF measure assesses a student's ability to segment three- and four-phoneme words into their individual phonemes fluently.
Nonsense Word Fluency (NWF)	Grade K – Grade 3	NWF measures letter-sound correspondence and the ability to blend letters into words. The student is presented with randomly ordered vowel-consonant (VC) and consonant-vowel-consonant (CVC) nonsense words (e.g., sig, rav, ov) and asked to verbally produce the individual letter sounds in each word or read the whole word.
Oral Reading Fluency (ORF)	Grade 1 – Grade 6	ORF measures reading fluency. Student performance is measured by having students read a passage aloud for one minute. Words omitted, substituted, and hesitations of more than three seconds are scored as errors. Words self-corrected within three seconds are scored as accurate. The number of correct words per minute is the oral reading fluency score.
Maze Adjusted Score	Grade 3 – Grade 6	Maze measures reading comprehension. Students are asked to read a passage silently. In the passage, every seventh word (approximately) is blank, with a maze of options (i.e., three possible word choices for the blank). One of the words in the maze is always correct, and the other two are incorrect. Maze requires students to choose the correct word as they read the passage. Students are given three minutes to work on this task.

Using DIBELS benchmark goals and composite score guidelines, teachers conducted

benchmark assessments with their students three times a year: beginning-of-year, middle-of-year,

and end-of-year. The DIBELS reading benchmark goals and cut points for risk provide three

primary benchmark status levels that describe students' performance: a) At or Above

Benchmark, b) Below Benchmark, and c) Well Below Benchmark. These levels are based on the

overall likelihood of achieving specified goals on subsequent DIBELS reading assessments. The

DIBELS reading benchmark goals are empirically derived, criterion-referenced target scores that

represent sufficient reading skills for a particular grade and time of year. Benchmark goals and

cut points for risk are provided for the reading composite score as well as for the individual

DIBELS reading measures. A benchmark goal indicates a level of skill at which students are

likely to achieve the next DIBELS reading benchmark goal or reading outcome. Thus, for

students who achieve a benchmark goal, the odds are in favor of achieving later reading

outcomes if they receive effective core reading instruction. Conversely, the cut points for risk

indicate a level of skill below which students are unlikely to achieve subsequent reading goals

without receiving additional, targeted instructional support. For students who have scores below

the cut point for risk, the probability of achieving later reading goals is low unless intensive

instructional support is provided. Refer to the Appendix for the *DIBELS Reading: Summary of*

Benchmark Goals and Cut Points for Risk.

During the TLI grant, the TRC assessment was administered for screening purposes at

benchmark assessment periods—beginning-of-year, middle-of-year, and end-of-year—and

served to progress monitor student performance in between those periods. The TRC is a reading

assessment that combines performance on indicators of foundational reading skills with

performance on a running records measure. TRC uses texts from several different guided reading

book sets to determine a student's instructional level. Complexity of these texts are indicated by

guided reading levels, that generally follow the fundamental criteria outlined in the work of

Fountas and Pinnell (2011): Genre/Form, Text Structure, Content, Themes and Ideas, Language

and Literary Features, Sentence Complexity, Vocabulary, Words, Illustrations, Book and Print

Features. During the TLI implementation, TRC served as a screening and progress monitoring

tool within the Response to Intervention (RtI) framework. As a screening measure, TRC was

used to categorize students' overall reading ability and indicate the need for further instructional

intervention. Additionally, the TRC was used to progress monitor students' reading proficiency

throughout the school year, select student-appropriate leveled texts for guided reading

instruction, and group students by ability level and skill. Below is a table of the 2014–2015 TRC

benchmark goals that were used for the students during the second year of TLI implementation.

Table 8. 2014–2015 TRC Benchmark Goals

Grade	Beginning of the Year (BOY) Reading Level Goal(s)	Middle of the Year (MOY) Reading Level Goal(s)	End of the Year (EOY) Reading Level Goal(s)
Grade K	RB	B	C to D
Grade 1	C to D	F to G	I
Grade 2	I	J to K	L to M
Grade 3	L to M	N	O to P
Grade 4	O to P	Q	R to S
Grade 5	R to S	T	U to V

Theme 1: Increased Focus on Student Literacy Assessments

The TLI grant helped teachers better focus on student literacy assessments. Based on the

one-on-one interviews with teachers, the literacy coach, the external literacy consultant, and the

school principal, the reading benchmark and progress monitoring assessments used by the school

became more important. A major sub-theme relating to teachers' increased focus on the student

literacy assessments related to targeting students' literacy needs. Most teachers reported that the

student literacy assessment *"helped to target student learning needs."* In fact, it was the most

prominent and frequent theme expressed by teachers during the interviews. Thirteen out of the 15 teachers, approximately 87 percent, mentioned that the implementation of the three-year TLI grant had a positive impact on their professional learning, teaching practices, and student learning. More specifically, 12 out of 15 described the TLI grant as having a *"positive impact on student learning"* and/or observed *"improved student tests scores."* This finding suggests that teachers consistently associated the TLI grant with the student literacy assessment and strategic data use. Conversely, two teachers stated that they observed minimal difference in student learning from the intensive student testing and data tracking.

> *"I think it helps students master skills. It gets them ready to go on to the next grade, and it really allows teachers to make sure that their literacy instruction is targeted… Through progress monitoring, I've been able to see if my students still need more time to work on this skill, and if so, then I'll have them continue working on that skill in stations and in guided reading, but if they've mastered the skill, then I know that I can move them onto another literacy skill."*
> –Kindergarten Teacher

In most cases, respondents reported the literacy assessment system assisted teachers in identifying problem areas and targeting students' literacy needs. Teachers described the mCLASS system as helping them focus on ways they can collect and access data and apply the information learned to differentiate literacy instruction for students. For instance, a third-grade teacher stated, *"Knowing my students' data from the different assessments and progress monitoring helped me to see what they have mastered and what they still need to be working on."* Similarly, another teacher reported, *"Thanks to the data, I know that an activity may not be appropriate for all students. Some students have far exceeded that skill, and they need something more challenging. Other students are working on something more basic."*

Precisely two-thirds of the teachers interviewed reported that their instructional responses based on student data led to improved literacy practices in their respective classrooms and

throughout the school. Several teachers indicated the literacy assessment system provided

"greater organization to understanding student literacy within the school." This finding

suggests having a common language and shared understanding of early literacy skills was

beneficial for teachers to discuss students' reading abilities and difficulties and effective

intervention strategies for remediation. The interview data supported this perception—the

teachers articulated having a better understanding of how the student assessment data are

connected to their literacy instruction. Several of the teachers expressed that they used results

from the benchmark assessments to identify individual students who needed tiered instruction, to

customize instruction to individual students' needs, to identify gaps in students' literacy skills,

and to assign or reassign students to groups to address their achievement gaps.

> *Attending to student data from benchmark literacy assessments just gives me an idea of what specific skills need to be revisited or enhanced for those students. A lot of times, when you do small-group instruction, it's sometimes very difficult to pinpoint exactly which skills a student needs help with. A student can fly under the radar, so if you don't have that data, then you're not going to pick up on the fact that the student is not decoding well, or is not using the reading strategies that we're presenting to the students. I think that it's important to collect that data, so no one gets lost in small-group instruction.* –Grade 5 Teacher

However, eight teachers noted that they continue to need support or assistance with

gaining a deeper understanding of the literacy assessment system and determining effective

instructional activities based on the assessment data. Additionally, five teachers expressed a

desire to modify the assessment system to better meet the students' learning needs. In general,

these teachers indicated the student assessment system and the data collection methods employed

through the TLI grant lacked flexibility and adaptability and, ultimately, were not beneficial for

all students, particularly beginning readers, struggling readers, students with disabilities, or

English Language Learners. Table 9 includes representative teacher quotes about the perceived

limitations with literacy assessment system.

Table 9. Teacher Quotes on Limitations with the Student Assessment System

Limitations with the Student Assessment System	Teacher Quotes
Text Reading Comprehension	*"I think TRC questions can be a little odd, the way they're phrased, and that can trip kids up more than their understanding of the text itself… I think the phrasing of the questions on the TRC can be a little clumsy… TRC is supposed to focus on comprehension and I think some of the books and some of the questions focus more on the structure of the books, which can throw kids off if you haven't been able to teach the structure of a nonfiction text or"* –Grade 4 Teacher *"The only disconnect I sometimes see is with the TRC testing when you get to the higher levels, a lot of the questions are about structure of a text not necessarily the comprehension, and I think that's the one place where I've had to incorporate that into guided reading, which I didn't know to do at first, and I don't think that's like a natural thing to decide to teach."* –Grade 3 Teacher
Text Reading Comprehension Benchmark Goals	*"I think that there's a big jump from kindergarten to first grade literacy. The TRC benchmarks for kindergarten are as high as they are for the beginning of the year for first grade. And then if a kid starts the beginning of first grade in 'yellow' [A target group] it's much harder for them to get to green by the end of first grade then it is for a kid that starts kindergarten at yellow."* –Kindergarten Teacher
DIBELS: Oral Reading Fluency (ORF)	*"Another thing is how many words they have to recall. I just don't see the purpose in that… The whole time you're tapping, you totally forget what they said because you're worried about tracking the number of words they recall. You're not really listening to what they're saying."* –Grade 2 Teacher *"The fluency test for the kids who are super low is not always useful. It'd be more useful if you're then giving them ... Like with TRC* [Text Reading and Comprehension]. *If they could only read 20 words a minute on the fourth grade one, I'd give them a lower level one."* –Grade 4 Teacher
DIBELS: Nonsense Words Fluency (NWF)	*"Well, I feel like when you're doing the tests, sometimes you have to rephrase the wording or instructions. Because the way they have it sometimes the kids don't understand it. So, sometimes I'll rephrase it. For example, with NWF, I know if I'll tell them to just tell me the words, they'll tell me all the words. But when I when say to tell me how it sounds, they'll go for the easier words and not challenge themselves… In the instructions, it says if you don't know the whole*

word, just tell me it. So it defeats the whole purpose that I've been teaching them to blend it and tell me how it sounds." –Grade 1 Teacher

Theme 2: Leadership's Expectations for Data Use

Leadership's expectations for data use was the second theme that emerged from the data consulted (i.e., one-on-one interviews with teachers, the literacy coach, the external literacy consultant, and the school principal). Additionally, documents were reviewed to provide detailed information about the benchmark assessment goals for students and progress monitoring schedule developed by the external literacy consultant for the teachers to implement with their respective student groups. Field notes from coaching sessions with select teachers, classroom observations, and PLC meetings were examined to understand leadership expectations and school norms around data use. A major sub-theme relating to expectations for data use within the school emerged from the data: leadership's expectations for increased data use. Eleven out of 15 teachers, approximately 73 percent, commented that the external literacy consultant and TLI resources have enabled the school to improve the collection and use of data to gauge student progress and inform teachers' literacy instruction.

According to the principal and literacy consultant, teachers have become more willing to collect and use data and are more comfortable doing so. They both agreed this was particularly true for returning teachers and that the new teachers needed more support with analyzing data and determining appropriate instructional responses based on the assessment data. Additionally, the principal and literacy consultant noted that teachers have begun to use data to inform daily instruction, which was evidenced by teachers' lesson plans, literacy stations, student groups, and guided reading instruction. During the teacher interviews, respondents frequently commented on

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the amount, varying types, and frequency of student literacy data they collected and used. Specifically, these teachers discussed an increase in the use of benchmark assessment and progress monitoring data. This quote from a returning teacher reflects a willingness to collect and analyze more student literacy data than in previous years.

> *I felt pretty comfortable with reading previously because I had a really great coach* [External literacy consultant] *last year. This year, what I have changed, is the amount of student data I collect from the literacy assessments and how often I analyze it. That has been an improvement for me this year and that's been something that I've changed.* –Grade 2 Teacher

Nine out of 15 teachers, 60 percent, indicated that benchmark data were useful to identify students' strengths and weaknesses. Teachers' reported use of benchmark and progress monitoring data to inform their literacy instruction speaks to the success of the external literacy consultant's efforts to train teachers on using data to create student groups for guided reading instruction and tailor instruction to individual student needs. The external literacy consultant offered data-related training and support to teachers through all-day professional development, PLCs, and one-on-one coaching sessions that focused on the use of the mCLASS technology platform; understanding the DIBELS and TRC assessments; administration of benchmark and progress monitoring assessments; interpretation of DIBELS and TRC data; and use of data to inform guided reading instruction. This finding suggests that the teachers' increased use of and confidence around data-based decision making contributed to a stronger culture of data use at the school, which may suggest that this particular aspect of the TLI grant may be sustainable after the program formally ends. One teacher remarked, *"I think data is definitely the foundation. We shouldn't be doing anything without purpose. We should be getting that purpose from your students' data."*

The external literacy consultant created and implemented a school-wide DIBELS and TRC progress monitoring plan for teachers to use in between benchmark assessments at the beginning, middle, and end of the year. The progress monitoring schedule was based on the students' DIBELS benchmark risk levels: a) At or Above Benchmark, b) Below Benchmark, and c) Well-Below Benchmark. The school adopted a color coding system to help categorize and visualize the students' risk levels. Students who scored "well below benchmark" were labeled red. Students who scored "below benchmark" were labeled yellow. Students who scored "at or above benchmark" were labeled green. The external literacy consultant and several teachers mentioned that any students who scored "above benchmark" were supposed to be colored blue; however, no students in the school scored above benchmark during the TLI grant. Table 10 shows the progress monitoring schedule used in the school.

Table 10. DIBELS Progress Monitoring Schedule

DIBELS Benchmark Risk Level	Color Coding System	Frequency of Progress Monitoring
At or Above Benchmark	Green	Every 4 weeks
Below Benchmark	Yellow	Every 2 - 3 weeks
Well Below Benchmark	Red	Every 1 – 2 weeks

The external literacy consultant explained that progress monitoring occurred more frequently for the students in the red band, which was approximately every one to two weeks after the benchmark assessments were completed and students were categorized based on their risk level. However, the external literacy consultant noted that her Amplify supervisor recommended progress monitoring the *"red students every week,"* which she thought was *"too often."* The students in the yellow band were progress monitored every

two to three weeks. The students in the green band were progress monitored every four weeks. The external literacy consultant explained the rationale for the frequency of the progress monitoring, *"because students who score 'well below benchmark goals' need intensive instructional support and are likely to have specific learning needs, we progress monitored them more frequently and modified their reading interventions dynamically to ensure adequate progress towards achieving benchmark goals."*

Teachers were expected, with support from the external literacy consultant, to use progress monitoring data from the TRC and DIBELS assessments to inform small-group literacy interventions and guided reading groups. According to the teachers and the external literacy consultant, red, yellow, and green student reading groups were determined by risk level, based on DIBELS and TRC measure scores. After reading groups were created by risk level, which are represented by color bands, students were further classified based on other observable reading trends that targeted specific reading skills. The external literacy consultant explained the student grouping strate*gy "helped teachers have an understanding of which students were having the same reading challenges."*

Additionally, the benchmark and progress monitoring data were used to create student "data trackers" and a "data wall." The data trackers were used to document student literacy data for DIBELS and TRC and were updated during PLC meeting or after one-on-one coaching sessions. Teachers had mixed responses about the use of the student data trackers and the data wall in the school. The principal, literacy coach, and external literacy consultant agreed that the data trackers were a reference point to discuss individual student's progress. Additionally, the data trackers and data wall helped visitors, DCPS observers, Amplify program supervisors, and representatives associated with the TLI grant understand how the school was capturing student

literacy data and focusing on moving students' reading abilities forward. Some of the teachers considered the data trackers and the data wall *"burdensome," "redundant,"* or *"not helpful,"* although others thought it was useful because it provided a visual representation of the progress their students were making at any given time based on the TRC and DIBELS measures. Similarly, the external literacy consultant described the data wall "*as a visual that was accessible to everyone in the building to see the changes in student literacy data over time."* The principal described the data wall as everyone's *"collective responsibility and commitment to ensure students were making progress and understand school-wide trends in the data."* This quote is from the external literacy consultant about the purpose of the data trackers and the data wall.

> *"Sometimes, during our CLC meetings, teachers would group students with the data tracker cards which were based off benchmark and progress monitoring data… I think the teachers needed something to manipulate that spoke to an area of focus and importance. As it relates to the data wall, it allowed the school leaders to observe the school data and was a starting point for conversations about students."*

Six teachers indicated that students were assessed too frequently. Despite the reported increase in teachers' use of data, some teachers reported difficulty finding the time to collect and analyze all the data. One teacher remarked, "*I think we can fall into this trap where we're collecting data every single week."* Another teacher suggested that other student data could be collected in the school, but due to the time-consuming nature of the progress monitoring and benchmark assessments, there was not enough time or resources to collect or analyze other student information that may influence student achievement. The fourth-grade teacher remarked, *"I think there's a draw away from other things that, as a school, we could be collecting data on, but we're so focused so much on progress monitoring."* Due to frequent progress monitoring, one teacher observed inconsistencies in the student's assessment data. This teacher suggested more

time was needed between the progress monitoring to allow students enough time to learn, practice, and/or master literacy skills.

> *"I think the progress monitoring timeframe should be changed, because every two weeks is not enough time to show growth. Maybe six weeks would be better. Something within six weeks shows a little bit more growth versus every two weeks, because it* [literacy data] *fluctuated so much. Sometimes students were on level and then they would drop down. There was inconsistency within the two week time span."*

Five of the 15 teachers, one-third of the teachers interviewed, mentioned that they also rely on their own independent observations and "informal" or anecdotal data collection to understand students' instructional needs. This finding challenges the predominant educational discourse that naturalizes the assumptions that data generated by standardized assessments is the most valid way to judge student progress and, ultimately, the school. Additionally, teachers who expressed this belief may value the "common sense" assumptions or professional intuition that resulted from ongoing teacher-student interactions and informal observations. For instance, some of these teachers commented that they *"knew"* their students learning needs through frequent checks for understanding, direct application of learning in student work, and observing how students read and write.

> *"I think anecdotal notes are the way to go, because it gives you more of a clear picture of what the student can do as a whole than on one specific day… I think it's never a surprise to me when a kid either doesn't move up or if they drop down a level. I think because I have taken notes about what they have been doing so the data is never surprising."* –Grade 4 Teacher

Some teachers did not agree with the school's data-use culture, which seemed to emphasize the use of data to drive literacy instruction for the purpose of ensuring students increased reading benchmark assessment scores. For instance, one teacher did not like the school's approach to target students for tiered instruction and literacy interventions that would *"push"* students to higher reading levels. She stated, *"Just the idea of pushing kids; I would say*

overall my philosophy is much different than the school's. I think reading should be more experiential and less regimented." An example of pushing kids and teachers can be seen in the school's norms: *"Be achievement focused,"* which was revisited during all of the observed PLC meetings and staff professional development days and printed on meeting agendas. Additionally, the achievement-focused school culture was reinforced by the "Chancellor Goals." According to the school principal, he co-developed the Chancellor Goals with the school chancellor based on the 2014–2015 schoolwide literacy assessment data from the beginning of the year. The observed PLC meetings and staff professional development days included the Chancellor Goals on all meeting agendas and were discussed by the external literacy consultant and principal at the beginning of any data meetings and Professional Development days.

Table 11. Chancellor Goals

Chancellor Goals for SY 2014–2015 End-of-Year *(Based on 2014-2015 Beginning-of-Year Test Scores)*	
DIBELS Goal	Increase the number of students meeting benchmarks (green) from BOY at 38% to 50% at EOY
TRC Goal	Decrease the percent of students performing far below proficient (red) in TRC from 62% at BOY to 31% at EOY

Four teachers remarked that they were concerned about the school's preoccupation with student data. For example, one teacher stated, "*I don't want to lose sight of the fact that these are whole people that we're teaching. There's a bigger picture than just their data.*" This sentiment suggests that the resources and time allocated to student literacy data collection and analysis may be misplaced, or at least overemphasized. In general, these comments reflected a belief that standardized testing and the practice of scrutinizing student data potentially had a dehumanizing impact. The school's data-driven educational climate adopted a discourse and practice of literacy

measurement and quantification rather than *"educating the whole child."* The following teacher

quote exemplifies the reification of student data:

> *"My one concern is that we make sure that we don't reduce learning to just data.*
> *I know data is an incredibly important tool to use. As important, if not more*
> *important to me, is student engagement and learning. Is the student happy with*
> *what he or she is learning? Do they feel like they're respected? Is it a topic that*
> *interests them? Do they feel rewarded by doing academic work? And especially in*
> *first grade, I don't want that aspect to be lost. The last thing I'd want is for six and*
> *seven year olds to be reduced to this composite number on a computer screen.*
> *Yeah, that's incredibly useful for me, but I'd hate to see that become the sole*
> *factor. And while I'm glad we do have these tools, I want to help keep them in*
> *perspective to make sure that we're teaching the whole child and just not the*
> *number they hit on a computer screen on a certain day.*" –Grade 1 Teacher

Additionally, three teachers voiced concerns about whether the full story of

students' growth or the impact of the TLI grant could be captured if the primary measure

of success was based on whether students moved from one reading level to the next. Both

teachers and the literacy consultant stressed that even if students do not move up a

reading level, they can show tremendous growth within a reading level based on variety

of reading skills and strategies that they are learning and applying when reading.

Three teachers and the external literacy consultant shared concerns about the district's

teacher accountability system. The DCPS teacher evaluation system, IMPACT, is a rigorous

multi-measure system comprised of a teacher's "instructional practice," which is based on

scheduled classroom observations conducted by school administrators, and "student

achievement," which is a value-added measure (based on the Partnership for Assessment of

Readiness for College and Careers [PARCC] assessment) that assesses student learning. In

DCPS, teachers are rewarded with performance pay, IMPACTplus, which can result in an annual

bonus of up to $25,000 after one year of being rated Highly Effective and an increase in base

salary after two consecutive years of being rated Highly Effective. Conversely, ineffective

teachers can be dismissed from employment. Three teachers expressed feelings of judgement by their colleagues and leadership when their student data did not move or if they had very low readers. Perhaps teachers felt that their value as a teacher was inextricably tied to their student's literacy data. Additionally, they may have been hesitant to share or discuss their students' literacy data because they perceived the PLC meetings as being evaluative. One teacher stated, *"Some of your IMPACT rating is based off of how much growth your students make and that's something that I don't like."* This finding may reflect the mounting pressure on teachers to ensure students demonstrate sufficient reading progress annually, which may create feelings of insecurity or resentment toward using data to measure not only student progress but teacher performance as well. Similarly, the external literacy consultant shared, *"Some aspects I don't like about it* [student data use] *is that teacher accountability is tied to it, which I don't think is right."* Overall, these comments reflect that student literacy data within the school and the district are not value-free or without potential consequences or rewards for teachers and school leaders.

During the final year of the TLI grant, three teacher leaders were selected by the leadership team to build leadership capacity for sustainability and succession planning. The principal and external literacy consultant noted that an important step in effectively implementing the initiative, as well as sustaining it, would be to build teacher leadership skills among the current teacher staff. The principal reported that he worked with the external literacy consultant to identify and develop grade-level teacher leaders who would ultimately assume the responsibilities of the external literacy consultant after the initiative concluded. The external literacy consultant indicated that these teacher leaders were selected due to their effective literacy instruction, comfortability with using data, organizational skills, and interpersonal relationships with the teaching staff and school leaders. When interviewing the teacher leaders,

they expressed that some teachers were reluctant to use student data to guide literacy instruction.

Table 12 represents quotes from the teacher leaders about data use in the school and their role in

sustaining the initiative.

Table 12. Teacher Leader Quotes on Data Use Sustainability

Teacher Leader	Quotes on Data Use Sustainability
Kindergarten Teacher	*"Not every teacher uses data as the forefront of their lessons, which could improve literacy instruction for all the students at the school. I think that'd be the only concern that I have regarding my role of supporting teachers next year with data use and guided reading."*
Grade 2 Teacher	*"I think some teachers were less receptive to it in terms of ... there were just a couple of teachers that didn't necessarily see the purpose of it. Sometimes the tediousness of going through it all can feel overwhelming or never-ending. But, when they see students making growth, then they'll see the purpose of it. But other than a few teachers' reluctance, it's been an easy transition for me in this new role."*
Grade 4 Teacher	*"'Cause everybody wants to do their own thing... So, once it's out the window* [TLI grant], *it's gonna change. Just knowing the way things are here; there's a lot of power struggles and people are gonna try to change things ... I want it done this way. And it's not working this way for me, so we're going to do it this way now."*

RQ2. How Did a PLC Focused on Data-Driven Literacy Instruction Influence Teachers' Perceptions of Literacy Practices in an Urban Underperforming School?

The data stem from one-on-one interviews with teachers, the literacy coach, the external

literacy consultant, and the school principal. Additionally, field notes from observed PLC

meetings were weaved together to create a vivid vignette of the interactions between the external

literacy consultant and the teachers.

Description of Teachers' Professional Development

During the final year of the TLI grant, the external literacy consultant led weekly meetings as part of a six-week CLC with a group of teachers on a predetermined topic related to data collection, data use, or literacy instruction. The data-related topics included the use of the mCLASS data system, administration of benchmark assessments, interpretation of DIBELS and TRC data, and use of data to inform guided reading and student grouping. Literacy topics focused on guided reading implementation, close reading of text for upper grades, setting up literacy stations, and developing students' reading fluency and decoding skills.

The majority of teachers reported being receptive to the TLI professional development offered by the external literacy consultant. This finding may be attributed to the external literacy consultant having built respectful and collaborative relationships with the teachers, who viewed the external literacy consultant as a data and literacy expert as opposed to an evaluative coach. Additionally, the principal noted that the external literacy consultant *"understood andragogy,"* which led to effective facilitation of data meetings and data discussions with teachers. However, a few teachers expressed their lack of satisfaction with the professional development led by the external literacy consultant because they did not have an opportunity to select meeting topics. Additionally, two teachers commented that the professional development lacked differentiation. For example, one teacher had to attend several CLC meetings on guided reading when she already had considerable experience with it. Three teachers expressed that the TLI professional development interfered with their time to meet with their grade-level colleagues for planning purposes.

The CLC meetings aligned with the coaching that the external literacy consultant provided, which also focused on implementing guided reading and small-group literacy

activities. Several teachers voiced an appreciation for TLI professional development topics being repeated in individual coaching sessions because it provided them with more practice to hone a specific skill. Overall, teachers expressed that the CLC sessions helped them use benchmark assessments to influence their instruction. Teachers and the external literacy consultant identified the following data-based decision-making activities occurred during the CLC meetings:

1. Assigning and reassigning students to literacy groups,
2. Identifying gaps in students' literacy skills,
3. Tailoring literacy instruction to student needs,
4. Analyzing student data and making instructional decisions based on the data,
5. Organizing students for small-group instruction, and
6. Implementing small-group student reading interventions.

Theme 1: Increased Use of Student Literacy Data

A predominant theme relating to how the PLCsupported teachers' data use and improved literacy practices emerged from the data: Teachers' increased use of student literacy data. Overall, most respondents asserted that they were more willing to collect and use student literacy data and are more comfortable doing so. Specifically, the teachers noted that they feel more comfortable with gathering progress monitoring and benchmark data for their students. Additionally, teachers noted that they use student data to inform daily instruction, organize students for small-group instruction, identify gaps in students' skills, and correct these through targeted instruction. Overall, nine out of 15 teachers, 60 percent, attributed the CLCs led by the external literacy consultant with helping them use data to inform their literacy instruction.

When teachers were asked to identify specific CLC tools or activities that were most beneficial, 10 teachers indicated CLC meetings that allowed them to analyze benchmark or progress monitoring data. In general, teachers explained that analyzing student assessment data helped them understand how their students think and approach reading processes. Additionally, teachers attributed data analysis to helping them raise questions about students' reading patterns,

reading strengths, and learning concerns. Five teachers mentioned the use of data trackers and

the data wall during the CLC meetings as being a helpful tool. They described the graphic data

display as a tool that helped direct their attention to their students' reading trends and growth

when exploring assessment results. One teacher commented that the data meetings involving the

data wall provided *"guided tours of the data. It helped us make sure the kids are actually*

learning what they need to learn. As opposed to just learning whatever." All three of the selected

teacher leaders commented on analyzing a variety of data sources during CLC meetings such as

TRC, DIBELS, running records, and the reading behaviors checklists to look for reading patterns

and diagnose reading challenges. The following teacher quote exemplifies how strategically

crafted data charts helped paint a picture of her students' reading progress.

> *"Probably how to take data, analyze data and use it to guide future lessons was*
> *most helpful. We focused a lot on analyzing data and keeping track of data, even*
> *to the point where we could keep it on a card* [data tracker]. *Even though*
> *sometimes it felt kind of like a lot, it made us have to write out the data, visually*
> *see it, keep track of it, and keep adding our progress monitoring on it to see if the*
> *students were reaching their goals. That part was so helpful to me, to have a*
> *visual of where my students are and where their goal is and where they need to*
> *go. So, just analyzing data." –Interview 4, Teacher*

Another sub-theme that emerged was the use of data to focus on low-performing

students. Seven teachers, nearly half, commented that they used assessment data to identify level

bands of students and to target individual and groups of students who needed reading

interventions. More specifically, these teachers discussed using assessment data to identify and

group *"struggling readers"* or *"bubble kids,"* students who were on the cusp of a DIBELS

benchmark risk level. For instance, one teacher remarked that the analyzing assessment data

helped her *"identify red band kids who were not meeting benchmark goals."* Another teacher

commented that she used assessment data to target her *"yellow students who were just below the*

DIBELS benchmark to get them to reach 'above benchmark' by the end of the school year." The

following is a teacher quote that represents the data-driven professional development she

received that helped her design reading interventions for low-performing students:

> *"During the Collaborative Learning Cycles, we'd come in here* [literacy resource
> room] *for our professional development day, and we just really did a lot of data
> analysis during PD day, and making plans for how to bridge the students who
> were low-performing, and how to get them up to a higher reading level." –
> Interview 8*

Six teachers, approximately 40 percent, identified collaborative teacher meetings

that allowed them to engage in a deep examination of a particular student's literacy data

as being a useful activity. The teachers and the external literacy consultant described this

CLC activity as *"child study."* During child study, teachers analyzed a variety of literacy

data for an individual student to develop a clearer understanding of the students' reading

strengths and weaknesses. One teacher stated, *"I think the CLC meetings where we*

picked one student and really looked at some of the trends that we were noticing and then

made plans based off of those were really helpful." This teacher quote exemplifies the

benefits of the child study activity.

> *"We all have that one kid that we are trying to figure out what they need or
> what's going on with how they are reading and processing information. So I
> think the most helpful thing for me was when I could go and look at what type of
> mistakes a student was making. So, if he is doing letter-naming fluency, you can
> see in the data, oh, he messed up on a lot of uppercase letters. You can go in and
> see exactly the way that you marked the assessment and see the common threads
> between the mistakes that he was making." –Interview 10, Kindergarten*

Despite the reported increase in the teachers' use of data during the TLI grant, some

teachers indicated difficulty with finding time to collect and analyze the data with all the other

competing demands on their time. Three teachers suggested having a designated data person who

would be responsible for collecting data, helping teachers use data in a consistent manner, and

supporting teachers with using data to differentiate instruction would help alleviate some of the

burden teachers face. Additionally, three teachers reported that their time could have been better spent during the CLC meetings to develop a deeper understanding of the data. For instance, one teacher mentioned that the focus of many CLC meetings primarily pertained to the timeframe, organization, and the process for data collection. This teacher indicated that she needed more time during the collaborative teacher meetings to have deeper discussions about the students' data. Overall, this finding confirms that teachers still need continued support with collecting and analyzing data.

> *I feel like our time could have been used more wisely. Sometimes there was a lot of talking at you versus being able to actually dig into the data... We never had enough time to finish what we needed to do, so we would have a meeting where we'd always have to take the work outside to complete it on our own time. So we needed more time to do the data cards and more time to look at the data and reading materials versus talking about the procedure, schedule and the process for progress monitoring. –Interview 7, Grade 5*

Theme 2: Improved Literacy Practices Through Collaboration

Eight teachers, more than half of the teaching staff, indicated that CLC sessions allowed them to learn best teaching practices from each other. Because the teachers rarely have an opportunity to observe each other's literacy instruction, the CLC allowed them to learn from each other. All in all, the CLC provided an opportunity for sharing resources, modeling instruction, and collaborative problem-solving among all the teachers. According to the external literacy consultant, the CLC, over time, allowed teachers to challenge each other to keep improving their professional practice and teachers became less fearful to opening up their literacy practices and student data to other teachers' questioning and feedback. The external literacy consultant referred to the CLC as *"fertile ground for cross-pollination of great teaching practices."* Additionally, the principal explained the purpose of the CLC was to *"bring all the teachers together, who were unwilling to be vulnerable and lacked trust initially.*

The CLC allowed the teachers' knowledge and skills to influence each other. It helped expose

them to different ideas and new ways to think about literacy and data." Following is a teacher

quote that reflects the benefits of collaboration with other teachers and the external literacy

consultant.

> "*I think it really helps to get a different perspective. Especially, a perspective of someone who can see multiple classrooms. A lot of the times, I'm kind of locked in my own classroom, and I need opportunities to see how other teachers might do it. With a consultant, who can bounce from class to class, they can help spread and share ideas that might exist in another room or another floor of the school that I just wouldn't, I didn't know even existed.*" –Interview 9, Grade 1

Five teachers, one-third of the teaching staff, indicated that the CLC sessions led by the

external literacy consultant provided an opportunity to be a reflective practitioner. Often, the

fast-paced school day, intensive testing calendar, and various administrative responsibilities

placed constraints on teachers' time to be reflective about what was and was not working well in

their respective classrooms. A few teachers commented that the CLC sessions allowed them to

ask critical questions about *why* and *how* they planned and delivered their reading instruction.

For example, at the end of the CLC sessions and professional development days, teachers

completed exit tickets by responding to reflective questions, such as:

> 1. *How will you change your practice?*
> 2. *How will this positively impact student learning?*
> 3. *What do you still need support with?*

One teacher remarked that the CLC sessions helped her to be more intentional about what

she was doing. Another teacher commented that the CLC helped her articulate and justify the

instructional decisions she was making regarding student groups, selected reading texts, and

literacy station activities.

> "*It helped me think outside of the classroom, like make the classroom the fishbowl, so I could sit back and reflect. When you work with children so much and you're with the children all day, you need to relate and connect with adults on the subject matter of*

*teaching. In our CLC meetings, you get a chance to share with your colleagues and talk
on an adult level. Sometime it's not only what we're giving to the kids, but how was it also
affecting us, and then reflecting on that, and seeing how we can deliver it better so we
keep moving the children forward." –SPED Teacher*

The following vignette is taken from field notes collected during a CLC session led by

the external literacy consultant with 14 teachers on the topic of guided reading.

Vignette 1: Collaborative Learning Cycle (CLC) on Guided Reading

It is the day before Thanksgiving, and a rainy morning, which eventually turns to light

snow flurries during the meeting. Andrew, the literacy coach, engages with the teachers as

they enter the literacy resource room. Of the 14 teachers attending the CLC session, most

arrive on time and begin discussing their holiday travel plans, *"Who is flying home for the

holiday?"* Andrew mentions that he is running in the annual Thanksgiving "Turkey Trot" race.

Another teacher mentioned she ran that race with her husband last year. Sarah, the external

literacy consultant, busily moves around the room organizing meeting materials and

welcoming teachers.

The room is set up with three round tables for teachers to sit at. There are small table

tents with teachers' names placed at each table indicating seating assignments for the meeting.

Four teachers sit at table 1, six teachers sit at a table 2, and four teachers sit at table 3. Each

teacher received a meeting agenda when the entered the room. At the start of the CLC session,

Sarah asks for a timekeeper volunteer and reminds the group that it is her expectation to *"start

on time and end on time."* Next, she reviews the Chancellor Goals for the 2014–2015 school

year, which are printed at the top of the agenda:

- **DIBELS:** Increase the number of students meeting benchmarks (green) from 38% at
  BOY to 50% at EOY

- **TRC:** Decrease the percent of students performing far below proficient (red) in TRC from 62% at BOY to 31% at EOY

Sarah explains that the Chancellor Goals were established to create a collective focus for the school year, and her role as the external literacy consultant is to support teachers and the principal in achieving these literacy goals. Next, she asks a teacher to read the meeting norms:

- Be achievement focused

- Have a "growth-mindset"

- Be collaborative

She asks another teacher to read the meeting objectives:

1. Teachers will be able to (TWBAT) assess their level of expertise in areas of guided reading

2. TWBAT observe a teacher-led guided reading lesson

Sarah explains the overall goal is to improve the quality, effectiveness, and consistency of guided reading instruction. Additionally, she states that she wants to develop a shared understanding and common language regarding guided reading. Three teachers were pre-selected to model a guided reading lesson to the teachers at their respective tables. The other teachers at the table were instructed to act like students during the activity. As the teachers modeled their guided reading lesson, Sarah visits each table to observe the teachers. At Jackson's table, Sarah asks, "*So what happens when a student speeds through a book?*" At Currier's table, Sarah refers to the book Great Habits, Great Readers: A Practical Guide for K–4 Reading in the Light of Common Core to help teachers think about different reading prompts to ask to improve questioning techniques. At Grossman's table, Sarah asks, *"What*

comprehension questions do you ask your students?" A teacher responds, *"Sequencing. What*

happened in the beginning, middle, and end of the story?" As the teachers finish modeling

their lesson, Sarah walks to the front of the room. She stops by one teacher and asks her, *"Was*

this helpful?" The teacher responds, *"This was beneficial. Thank you."*

Sarah passes out two documents, a guided reading lesson plan template and a pre-

coaching cycle questionnaire. One teacher remarks, *"We already have a lot of lesson planning*

templates," but the comment was not addressed. Sarah asks the teachers to complete the

questionnaire during the meeting. The questionnaire includes the following questions:

1. What do you already know about guided reading/teaching reading?
2. What trainings, classes, or workshops have you attended that addresses reading or literacy?
3. What are some wonderings you have about guided reading?
4. What are two goals you hope to accomplish during this guided reading cycle?
5. How do you learn and work best?

RQ3. How Did Teacher Coaching Provided by an External Literacy Consultant Influence Teachers' Perceptions of Literacy Instruction in an Urban Underperforming School?

The data stem from one-on-one interviews with teachers, the literacy coach, the literacy

consultant, and the school principal. Additionally, field notes from observed teacher coaching

sessions were weaved together to create a vivid vignette of the interactions between the external

literacy consultant and a teacher selected for additional instructional coaching.

Description of Teacher Coaching

All the teachers received instructional coaching from the external literacy consultant. The

focus of coaching included the following topics: 1) making instructional decisions, 2)

implementing small-group instruction, 3) lesson planning, 4) developing literacy work stations,

5) managing classroom environment, 6) using technology for literacy activities, 7) shared

reading, and 8) guided reading. However, every teacher did not receive coaching on all of these topic areas. The external literacy consultant indicated that coaching support was highly individualized based on teacher capacity and the instructional objectives for the class.

According to the teachers and the external literacy consultant, the predominant coaching activity included classroom observations during the literacy block followed by a debrief with the external literacy consultant, which allowed her to provide instructional feedback to the teachers. Typically, the external literacy consultant would schedule a 30-minute classroom observation and a 30-minute debriefing session during the teacher's planning period. However, the external literacy consultant mentioned that some classroom observations extended beyond 30 minutes if she thought the teacher needed additional support with classroom management or if she decided to work with students engaged in a particular literacy activity.

Both the external literacy consultant and principal indicated that the role of the external literacy consultant changed over the course of the TLI grant. In particular, the focus of the coaching sessions shifted from classroom management and lesson planning, which predominated the first year of the initiative, to the implementation of specific literacy best practices during the second and third year of the grant. Another shift in the role of the external literacy consultant included spending less time with veteran teachers and more time with new teachers during the last year of the grant. Initially, teacher coaching primarily related to instructional planning and managing the classroom environment during literacy instruction. However, coaching activities related to phonics, fluency, and guided reading became the core focus during year 2 and year 3. Additionally, during the final year of the TLI grant, the external literacy consultant worked with three teachers to help build their leadership skills to sustain effective literacy practices and teachers' data collection and data use after the TLI grant ended.

Several teachers reported that the external literacy consultant modeled literacy instruction and co-taught in their respective classrooms. During the interviews, a first grade teacher stated, *"I think the modeling inside the classroom is most useful."* However, these types of coaching activities did not occur frequently or with every teacher. Of the six teachers that discussed modeling, many shared that they would have preferred more opportunities to observe the external literacy consultant model guided reading instruction and small-group instruction in the classroom. These teachers indicated that modeling followed by a debriefing session afterward with the external literacy consultant was the most desired form of coaching and the most effective strategy to change their teaching practice.

Theme 1: Improved Approaches Toward Literacy Instruction

One theme relating to how coaching improves, supports, and builds literacy practices emerged from the data: Offers improved approaches toward literacy instruction. Respondents asserted that coaching offered them the ability to consider approaches to literacy instruction that they may not have considered previously. The data suggest coaching improved teachers' instructional practices and student literacy in the school.

Of the 15 teachers interviewed, 11—nearly 75 percent of teachers—indicated the support they received from the external literacy consultant on guided reading was valuable. Specifically, these teachers referenced that learning how to conduct effective guided reading was extremely beneficial. In fact, most of these teachers believed this was the most successful part of the TLI grant. The kindergarten teacher shared, "*I think, I wouldn't have known how to do guided reading the most effective way without the coaching, so that's definitely changed my literacy instruction.*" This finding was supported by both the external literacy consultant and principal,

who agreed that the external literacy consultant spent most of her time supporting teachers with implementing guided reading in small groups.

> *"I think that everything that I know about guided reading practice is owed to the coaching, because I didn't do guided reading before I came to this school this year. Everything that I do now, everything that I know now, is because of the coaching." –Interview 8, Grade 1*

When teachers explained how their literacy instruction shifted, nine noted that they had not previously used a small-group literacy model in their respective classrooms or schools. In many cases, teachers remarked that they had not received any guidance on how to design and implement small-group instruction before the TLI grant. For instance, a veteran teacher explained that prior to the consultant's arrival she mostly relied on direct instruction due to the training she received in her teacher preparation program. Additionally, some teachers explained that literacy instruction was not a content area that they had a deep understanding of or opportunities to teach due to departmentalized school structures. For instance, some teachers mainly provided math or science instruction previously and had not been expected to provide reading instruction. The following is a teacher quote that reflects a shift from direct instruction to a small-group literacy model.

> *"Because my background is math education, I didn't really have that much training in literacy. There's been a huge shift since I was in college regarding literacy instruction. Now, it's small-group instruction and guided reading. Those weren't things I learned about when I went to college. There was definitely a direct instruction emphasis and that was it, so it's definitely changed my approach from doing direct instruction to small-group learning to really help move the kids." –Interview 12, Grade 2*

Eight teachers, slightly more than half, indicated that coaching helped them think about student grouping based on assessment data and reading behaviors. These teachers indicated that coaching conversations with the external literacy consultant allowed them to think through *when* to regroup students when reading skills were mastered and *how* to have more nuanced literacy

groups within a guided reading level. For example, a second-grade teacher explained that the majority of her class were all on the same guided reading level, but the students displayed different reading behaviors. She attributed coaching to helping her understand how to differentiate student learning needs and group her students by reading skill within the guided reading level. Additionally, some of the teachers associated student progress toward meeting mid-year and end-of-year reading goals with the coaching they received. One teacher explained that because she frequently regrouped her students and aligned instruction to their literacy needs, they were able to diversify their reading skills more quickly and progress to higher guided reading levels.

> *"All of my students showed reading progress from the beginning of the school year to now. I have four students that are reading above proficiency. The majority of my students met their annual goals, and I think that was definitely with the help of Sarah* [external literacy consultant], *frequent regrouping of students, and having her guide me through the guided reading process." –Interview 7, Grade 5*

Another shift in the teachers' literacy practices included tracking and analyzing students' reading behaviors and making instructional responses to data. In addition to the TRC and DIBELS progress monitoring teachers were required to complete, teachers were directed to collect informal data on students' reading behaviors. Teachers were encouraged to use running records and checklists that the external literacy consultant developed based on the reading skills students should demonstrate at each guided reading level. According to the external literacy consultant, she developed reading behaviors checklists based on the research of Fountas and Pinnell (2011), which gave teachers a scope and sequence of reading behaviors and understanding to notice, teach, and support as children progress through guided reading levels. Six teachers, 40 percent, indicated that the external literacy consultant helped them analyze and understand their students' learning needs based on the running records or the reading behaviors

checklists. During coaching sessions, the external literacy consultant would support teachers in understanding students' common reading difficulties and strengths and identify literacy activities that could address student-learning needs.

> *"I think learning how to do a running record and using the reading behavior checklists that we have for guided reading was really helpful, because then after the lesson, I could look at those checklists and really understand, okay this student's having difficulty with ending sounds of words so I know in literacy stations, I'm going to have an ending sound activity. I think that was really helpful. I think also working with her to find literacy station activities was helpful, because when my kids got bored with the activity or it wasn't really effective anymore, Sarah helped me look for new activities that helped their learning." – Interview 1, Kindergarten*

Another sub-theme that emerged from the teacher interviews included understanding student reading behaviors aligned to guided reading levels. Five teachers, one-third of the respondents, attributed coaching to helping them understand a continuum of literacy behaviors that students can demonstrate. Having a guide or checklist of reading behaviors to observe or assess for each guided reading level allowed the teachers to identify concrete skills that students needed to develop. As a result, these teachers indicated improvement in making informed decisions about what to teach.

> *"Well now I can probe and figure out what kind of miscues kids are making and how to move them from there. I also have a better understanding now of each guided reading level and the different reading behaviors that the level includes. By understanding the reading behaviors my students need to develop, I know what to teach them." –Interview 2, Grade 3*

The following vignette is taken from field notes collected during a classroom observation with the Grade 1 teacher, who was facilitating a guided reading lesson with her students. This teacher was identified by the principal and the external literacy consultant as needing additional coaching.

Vignette 2: *Ms. Abby's Classroom Observation (Grade 1)—Guided Reading.*

Sarah and I entered the first grade classroom, and Ms. Abby was leading a guided reading lesson with four students seated around the half-moon activity table. The teacher was positioned in the center of the table. At another table, there were four students independently using laptops with earphones. The special education teacher entered to the room to collect three students for pull-out instruction. A paraprofessional was working with three students in a small group for another literacy station in the back of the room.

For Ms. Abby's guided reading lesson, each student had the book We're Going on a Nature Hunt by Steve Metzger (Reading Level I) in front of them. Before the students began reading, Ms. Abby asked, *"Is this story fiction or non-fiction?"* The students did not offer a response to her question. The teacher told the students that the book was *"realistic fiction"* and explained, *"That means it can happen in the real world."* She picked up a small white board and wrote an exclamation mark. Afterwards, she demonstrated how to read text using expression. The students laughed at her animated voice. She asked the students, *"What do we do if when we come to a word we don't know?"* She called on a male student, who raised his hand. He responded, *"We use the decoding strategies sheet."* She modeled how to use different decoding strategies to figure out words that students may not know how to read.

As the students began to read the book, they tracked the words on the page with their finger. When a female student came to a sentence with an exclamation mark, she read the sentence with excitement, as the teacher modeled earlier. Then the student came to the word *"meadow,"* she began to tap out the word with her finger, a phonics decoding strategy modeled by the teacher previously. The female student tried to work out the ending sound, *"ow."* After a few attempts to pronounce *"meadow,"* the teacher wrote *"ow"* on the small

white board and gave the students the sound. She directed the students to repeat the sound. She then pronounced *"meadow."* Next, a male student started reading. With excitement, he read aloud another sentence ending with an exclamation mark. When he tried to sound out *"beehive,"* the teacher asked the students, *"What decoding strategy should we use for this word?"*

Theme 2: Teachers Attempted Suggested Instructional Changes

The data stem from one-on-one interviews with school teachers, the literacy coach, the literacy consultant, and the school principal. One theme relating to how teachers negotiate potential changes in literacy practices emerged from the data: Teachers agree to try or compromise with suggested literacy practices or instructional changes given by the literacy consultant. Although the external literacy consultant acknowledged that she experienced occasional opposition from teachers regarding specific literacy practices, lessons, or strategies that she recommended, the majority of teachers indicated a level of receptivity to the coaching provided by the external literacy consultant. The external literacy consultant would try to negotiate some compromise that supported both teacher autonomy and the instructional practices she suggested. Respondents asserted that they attempted to change their literacy practices resulting from coaching or they would determine some type of compromise.

Nine teachers commented on remaining open-minded and flexible in reference to being coached by the external literacy consultant. For example, the third-grade teacher stated, *"I try to just stay open-minded and not just feel like my way was the only way of doing things."* The principal, literacy coach, and external literacy consultant attributed the teachers' coachability to developing a growth-mindset in the faculty. A series of professional development sessions led by the external literacy consultant focused on Carol Dweck's (2008) research on creating a growth-

mindset. Collectively, the leadership team tried to move the faculty away from a fixed mindset and toward a growth mindset as it related to the teachers' willingness to try new instructional strategies, take risks in the class, grow comfortable with using data and technology, and remaining open to professional learning experiences. Additionally, this sub-theme suggests that many of the teachers trusted the expertise and experience of the external literacy consultant.

> *"Just being open to the fact that this was a new experience for me, and that I wasn't an expert in literacy, and the people that I was working with had more experience with teaching reading. Just being open to the process, I think, helped change my practice in my classroom." –Grade 5 Teacher*

The external literacy consultant indicated that she encountered occasional resistance from teachers to the suggested instructional strategies she offered during coaching sessions. When a teacher appeared resistant, the external literacy consultant would try to find a compromise that honored both teacher autonomy and the literacy practices she wanted implemented. For example, she would tell teachers, "*Well, you do these parts your way and just try this one thing.*" In an effort to support the teacher's growing comfortability with the instructional change, the external literacy consultant would offer to revisit, modify, and/or scaffold the suggested strategy.

> *"If I think about any resistance with teachers, if I ever encountered that, and I did, I would always just be like, 'Well why don't you try it out first and then if doesn't work, then let's talk about it or let's check back in, in two weeks, or I'll come do it with you in your classroom." –External Literacy Consultant*

Four teachers, approximately 25 percent, commented on their ability to adjust or customize the external literacy consultant's suggested strategies, interventions, or instruction to better meet students' needs. This sub-theme suggests that teachers experienced a level of professional independence to make autonomous decisions about what they ultimately teach and how they teach their students. Additionally, this sub-

theme may indicate the teachers' belief that they understand the needs of their students better than the external literacy consultant.

> *"I mean I can look at the literacy lesson that the external literacy consultant helped create, but if I know there's something that a student needs that I might need to change, I feel comfortable in making that adjustment as long as I can justify why I'm making that instructional change." Interview 5*

The following vignette is taken from field notes collected during a coaching session with the Grade 1 teacher, who previously facilitated a guided reading lesson with students. This teacher was identified by the principal and the external literacy consultant as needing additional coaching.

Vignette 3: Ms. Abby's Coaching Debriefing Session (Grade 1)

The coaching debriefing session was scheduled at noon in the literacy resource room, and Ms. Abby came to the meeting 10 minutes late. The literacy resource room houses all the guided reading books and other literacy resources through the TLI grant and is where the external literacy consultant carries out most of her work. She leads the professional development sessions with teachers in this room. Displayed in the middle of the literacy room is a data wall of the students DEIBELS and TRC scores.

Sarah was sitting at a round table with her laptop, and Ms. Abby sat in a seat across from her. Sarah quickly commenced with the debrief, *"Let's discuss the guided reading lesson you conducted with your four kiddos."* She asks the teacher, *"What made you group those four kids together?"* Ms. Abby responds, *"Most of them are on the same level, and they are the focus kids that I was trying to move by EOY."* Sarah inquired about one girl in the reading group, and Ms. Abby explained the student had not demonstrated enough progress to move to a higher reading group. Sarah probes further, *"Let's discuss the progress she has made."*

While Ms. Abby is discussing the student, Sarah is studying the students' literacy data in the mCLASS platform on her laptop.

"Thanks for sharing your reasoning for why you grouped those students together." Sarah indicated the students' data were aligned based on the progress monitoring results in mCLASS. Sarah posed another question, *"What reading skills do they need support with?"* Ms. Abby begins to describe the student's individual reading behaviors, *"Trey solves reading mistakes automatically; fixing words that don't seem right. He reads with expression. Deon knows how to rely on the decoding strategies and uses the strategies independently. Gabriella needs prompting when decoding for vowel teams."* Sarah shifts the discussion focus toward reading comprehension, *"Are they in the same place regarding comprehension?"* Sarah shows Ms. Abby where she can locate and use the mCLASS stem questions to check for students' reading comprehension. Sarah identified key comprehension questions and questioning techniques the teacher should use, *"What's the main topic? What are the important details? Ask open-ended questions to elicit more than one-word answers. Ask questions that require the students to rely on text evidence to support their thinking.*"

Sarah stated the end-of-year reading level goal for first grade is "reading level I," which the students had already reached. Sarah reviewed the reading behaviors students should demonstrate for reading level I. Sarah placed a data tracker sheet in front of Ms. Abby and mentioned, *"I noticed that you were not using the data tracker when the students were reading."* Sarah shows the teacher how to use it with her reading group. Sarah indicated that she could customize it to include some reading comprehension questions. Sarah reminds Ms. Abby, *"Everything you need is in the data tracker, and so you need to be using it consistently."* Ms. Abby tells Sarah that she is interested in a data tracker for non-fiction texts.

> Ms. Abby's attention turned to her phone, and she started texting as the meeting came to a close.

Theme 3: Emphasis on Small-Group Literacy

The data stem from one-on-one interviews with school teachers, the literacy coach, the literacy consultant, and the school principal. Documents were reviewed to provide detailed information about the literacy practices implemented in the school. Additionally, field notes from teacher classroom observations were weaved together to create a descriptive vignette of the small-group literacy practices. A significant sub-theme relating to the conceptualization of literacy instruction in the teachers' classrooms emerged from the data: Small-group literacy activities, such as guided reading and shared reading. When asked *"what does literacy instruction look like in your class?"* most teachers reported that literacy instruction included guided or shared reading in the classroom with discussions about the books students were reading. This finding suggests that teachers viewed literacy instruction as a community task within the classroom rather than an individual task. Additionally, teachers perceived literacy instruction to be varied and differentiated to students' needs and focused on improving specific reading skills such as decoding, fluency, comprehension, and vocabulary building. The following is a direct quote taken from a teacher's interview that exemplifies this salient theme:

> *"I think shared reading is so important. With all the focus on fluency, school-wide, we put a pretty big push on shared reading. Within that, vocabulary building and word study to me is important because a lot of our kids ... Part of what holds them back from getting to the next reading level is just a lack of background knowledge*

about topics and words. The guided reading block is such an important part of the day now, because that's when the kids who are much lower or much higher, they get what they need to move to their next level." –Grade 4 Teacher

A majority of the teachers, 67 percent, reported positive changes in their guided reading practices. Ten out of the 15 teachers interviewed reported that guided reading was adaptable for making instructional changes based on student assessment data. A major focus area for the external literacy consultant was strengthening teachers' use of data for various instructional purposes. Specifically, she supported teachers' data use to inform guided reading instruction, to create student reading groups, and to select appropriate books that were easy enough for students to read with fluency while using specific problem-solving strategies to decode words or comprehend new concepts or ideas. For target students groups that scored "well below benchmark goals," the external literacy consultant worked with teachers to identify intensive reading supports that could be used during guided reading activities, such as:

- delivering guided reading instruction in a smaller group,
- providing more instructional time or more practice,
- presenting smaller literacy skill steps in the instructional hierarchy,
- providing more explicit modeling and instruction, and/or
- providing greater scaffolding and practice with reading skills.

Six of the 15 teachers mentioned that book selection and using appropriate children's literature for literacy instruction was influenced by the students' assessment data. Similarly, 40 percent of the teachers mentioned shared reading methods and literature discussions, such as facilitating literature circles, were influenced by data use.

"When we're in guided reading, it's more focused on their needs and ensuring that they're growing at an appropriate speed and level. If there's any gaps from previous years, then that's being filled so that they can catch up and grow in their reading level, while also teaching them how to fluently read and comprehend a text." –Grade 2 Teacher

Several teachers reported that they observed a positive shift in how the students interacted and engaged in classroom literacy activities. For example, teachers noted students had an increased focus and enthusiasm for reading, writing, and small-group literacy activities. This finding may be related to technology resources such as smartboards, iPads, and Elmos purchased through the TLI grant that are integrated into the 120-minute literacy block. For example, during a third-grade classroom observation, six students were independently reading on iPads while the teacher conducted small-group instruction with four other students. The principal noted observable improvement with respect to the use of iPads and computers to aid small-group instruction and engage students in literacy activities. The following quote highlights how effective student grouping and targeted literacy activities aimed at developing a specific reading skill resulted in improved student engagement and positive literacy practices:

> *During the Collaborative Learning Cycle (CLC), we identified a student target group around the same fluency skills. Mainly 'chunking' and 'phrasing' reading passages. And we were able to come up with an activity that was not only challenging but engaging. They* [students] *are able to track their own mistakes; they are able to track their own growth, especially in data. And I felt like that was a very positive outcome of the work."* –Grade 1 Teacher

The principal, literacy coach, and external literacy consultant described an intentional effort to provide teachers with more coaching on guided reading during the last two years of the TLI grant. As a result, the literacy consultant helped the teachers manage guided reading more effectively through systematically reviewing student data, which resulted in teachers making substantial improvements to their guided reading instruction. Interview data from the principal, literacy coach, and external literacy consultant indicated positive changes in teachers' literacy practices. In particular, they observed increased teacher confidence in various aspects of literacy instruction, such as using leveled readers, guided reading implementation, and data-based decision making.

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The principal and external literacy consultant both reported observable improvements in how teachers used the 120-minute literacy block, evidenced by more detailed, intentional lesson plans for small-group literacy rotations. This finding may result from the incorporation of technology resources during the 120-minute literacy block and leveled books for guided reading purchased through the TLI grant. Prior to the TLI grant, one teacher shared, "*I had to photocopy all of the guided reading books for each student and for every reading group in my class,*" a time-consuming process that the teachers no longer have to endure because the external literacy consultant created a resource room full of leveled readers. In general, the teachers expressed satisfaction with the additional literacy and technology resources the school received from the TLI grant because these resources enabled the teachers to have a smoother implementation of the 120-minute literacy block.

Although the principal and literacy consultant agreed that the teachers started to implement small-group instruction more effectively and gained a clearer sense of the components of the 120-minute literacy block, the literacy coach had a different perspective. Specifically, the literacy coach expressed that the guided reading rotations or student literacy stations were not implemented consistently or effectively across classrooms or even within a classroom. Additionally, he noted that a major drawback with the small-group literacy rotations was a lack of accountability for how the students in primary grades are learning and engaging with the work.

> *"Regarding the 120 literacy block with student specified stations, I think one thing I struggle with, at times, is what the literacy station should look like. I think it's easy to say, 'Let's put every kid at a station and that will work.' I think conceptually that's an awesome idea, but it's hard to have six and seven year olds working independently for sometimes over an hour a day. So much of what they're doing doesn't always have a way to check on how they're doing it, and that concerns me. The younger they are, the more it concerns me. As cute as it is, and as useful as it might be as well, to see kindergarteners, for instance, reading out*

flashcards, if they're always reading those wrong and there isn't a teacher there to redirect or correct the students' learning, it's not useful. I think something Mr. Hamm [principal] *and I, and Sarah* [external literacy consultant] *have talked about a lot is how we can make those stations as accountable as possible, and that's not always easy to do… There's the conceptual side and the practical side, and we need to make sure that they're both fitting together all the time" –Literacy Coach*

The following vignette is taken from field notes collected during a classroom observation of the Grade 5 teacher, who was facilitating a shared reading activity and small-group literacy instruction with students. This teacher was identified by the principal and the external literacy consultant as needing additional coaching support.

Vignette 4: Ms. Cline's Classroom Observation (Grade 5)—Small-Group Literacy.

The 120-minute literacy block was already underway when Sarah and I entered the classroom mid-morning. There were 12 students in the class sitting in desks aligned in rows facing the blackboard. The student-learning objective is printed on the white board, *"Students will make predications from the text."*

The teacher was reading aloud to the class using a book on the LCD projector. Once the teacher completed the reading passage, she called on a male student to come to the front to facilitate a class discussion about what was read. He appeared confident as he assumed the role of the teacher. As the student facilitator, he asked aloud comprehension questions from a stack of cards that focused on summarizing, predicting, and clarifying. He then asked the class, *"Who has a question about the text?"* Two male students raised their hands to ask questions. One student asked, *"Are there any words to clarify?"* A female student inquired, *"What's a smoke stack?"* The teacher refers to the text and quickly explains a smoke stack. Another female student collected the comprehension cards for the teacher and placed them on the teacher's desk signaling that the reciprocal teaching activity had concluded and it was time for

the students to transition to small-group learning stations.

Four students grabbed laptops and earphones and walked to the carpeted area in the back of the classroom. The teacher directed four other students who remained seated at their desks to complete a graphic organizer. She instructed, *"I want you to explain why a text quote connects to the chapter title."* The teacher selected a quote from the book, highlighted the text, and placed the book back on the LCD projector. The students were directed to complete the graphic organizer by copying the highlighted text, writing down the chapter title, and providing a written explanation of the connection.

The teacher then headed to a round table where four students were already sitting with their book, Oggie Cooder by Sarah Weeks. She then reviewed vocabulary words *"grin,"* *"hesitate,"* *"reluctantly,"* and *"hideous,"* which she explained as being *"very ugly."* She picked up her lesson plan and read aloud the objective for the small-group literacy lesson, *"We will use decoding strategies to read words we don't know."* She then stated the focus question, *"Why is playing basketball important to Oggie?"* The students started to read aloud in a round-robin fashion. As one student read from the book, he referred to the decoding strategies chart when he came to the word *"concentrated."* He attempted a decoding strategy but continued to mispronounce the word. The teacher pointed to another decoding strategy, Chunky Monkey, with a picture of a monkey cartoon. She then directed the student to chunk the word in three-letter parts, *"con-cen-tra-ted."*

Theme 4: Leadership's Expectations for Literacy Practices

The data stem from one-on-one interviews with teachers, the literacy coach, the literacy consultant, and the school principal. Documents were reviewed to provide detailed information about the literacy practices implemented in the school. One key sub-theme relating to the

alignment between teachers' literacy instruction and leadership's recommended literacy practices emerged from the data: Teachers' literacy practices aligned with or tried to meet leadership's expectations for literacy instruction. Specifically, nine out of the 15 teachers interviewed, 60 percent, indicated that they try to align literacy instruction with leadership's expectations.

Respondents asserted that they try to align their instruction with the external literacy consultant's recommended literacy practices in an effort to meet or conform to expectations, perhaps to avoid conflict or a negative performance evaluation from school leadership. For example, one teacher stated, "*I usually try to do it like that once, because I do have to do what's expected. I try to do a balance of what I think is best for my students with what needs to be seen by leadership.*" This finding also suggests that the teachers perceived the external literacy consultant as being part of the school's leadership team. The principal, literacy coach, and external literacy consultant had regular and visible collaborative meetings to discuss ways to support the teachers' professional development around assessment literacy, data use, and literacy instruction. During these collaborative meetings, which often occurred after the external literacy consultant facilitated a weekly CLC meeting, the external literacy consultant, literacy coach, and principal would discuss the teachers' participation in the CLC meetings and coaching sessions, progress with implementing prescribed literacy practices, or use of student data. Most often, they would focus their attention and discussion on teachers who appeared hesitant or less effective with literacy instruction or collecting and analyzing student assessment data. Consequently, many of the teachers may have associated the external literacy consultants' instructional feedback from classroom observations and suggested literacy practices as directives that had to be followed.

"*I'm resigned to be quiet and conform to what they* [leadership] *want. So I can have my peace and quiet… Because somebody made a comment like you're at*

your best when you're enjoying what you do. Now, it's at the point where I'm just like, okay let me be quiet and do what I'm told to do so when I get observed by Principal Hamm, I don't get a bad score." –Special Education Teacher

However, as the teachers implemented the recommended strategies, respondents typically noted that there was alignment with their own instructional practices and what was proposed by the external literacy consultant. This finding may reflect the time needed for teachers to understand or become confident with the proposed changes to their literacy practice during the three-year implementation of the TLI grant. Additionally, this finding may reflect a level of trust that had to be developed between the teachers and the external literacy consultant. Many of the teachers who indicated alignment between their classroom literacy practices and the school's direction for literacy instruction referenced a willingness to learn new strategies and techniques, which suggests an adaptability to instructional changes and commitment to professional growth.

> *"Now that I understand the process, I think it aligns better to the students' needs…I think being open to the changes and not shutting down because it was new to me helped me see that things are beneficial with the literacy process at our school."* –Grade 5 Teacher

Responses from four teachers appeared to value the importance of having consistent literacy practices throughout the school that supported horizontal and vertical alignment of literacy instruction. This finding supports the leadership's vision and efforts to develop coherence around the school's literacy practices.

> *"My views completely align with what we're doing. I think that the structure that we follow is what's best for our kids, and I think that it's been great for me to see the purpose of following that same instruction. I think that for kids to move into the next grade level knowing that this is the way that we do it and being familiar with the structure of guided reading is why I think it's important that we all align our literacy practices."* –Grade 3 Teacher

However, three teachers expressed challenges with using small-group literacy stations and guided reading during the 120-minute literacy block. These teachers indicated that a lack of

adult supervision and support in the classroom hindered their ability to effectively implement small-group literacy stations. Specifically, teachers indicated that student behavior problems caused distractions to student learning during literacy rotations. Furthermore, teachers' consistent redirection of off-task behaviors exhibited by disruptive students at literacy stations impeded their ability to effectively lead and focus on guided reading instruction with a small group of students. One teacher commented on the pressure she felt from leadership to implement small-group literacy stations with special needs students:

> *"I got my kids' back at heart, and I believe that it was frustrating for the students to have all of these different components put on them within the literacy block. All of my kids have extended time, but when you tell me every 20 or 30 minutes you want to see me change the class over, so I can get another group going, that's not how my kids work. It's really imposing stress. I have to cut them off and shut them down when they're just really getting the groove of it."* –Special Education Teacher

Although a majority of the teachers perceived an alignment between their instructional practices and leadership's recommended literacy practices, a few teachers strongly disagreed with the school's overemphasis of fluency over other reading skills. In general, fluency was a common topic across the teacher interviews. Teachers mentioned modeling fluency during shared reading and guided reading lessons and planning small-group literacy stations around increasing reading fluency. However, some of the teachers hinted at an ongoing tension between leadership's focus on fluency and teachers' interest in developing students' reading comprehension. Below is a teacher quote that highlights the school's prioritization of fluency.

> *"I question how much we push fluency, because I've noticed kids read fast just to read fast. They think it's this wonderful skill that gets measured so much…We applaud the kids who met their fluency goal, and they're not necessarily as worried about reading to understand. They see reading as something you do and not really something that you process; that's the best way I can put it. I would like to see a shift from fluency, fluency, fluency to more comprehension of content and how they're able to learn from reading."* –Grade 4 Teacher

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Similarly, three teachers, who were all upper elementary teachers, expressed a desire to integrate more conversations about books and literature into their instruction. These teachers discussed what they thought was potentially lost or compromised with the school's focus on guided reading and small-group literacy. One teacher explained what she perceived was lacking instructionally for students.

> *"I think just the ability to have a discussion about a book. They don't know how to candidly talk to each other about reading or characters or anything like that because it's so focused on some of the questions from the TRC testing. They don't have open conversations with each other. They don't know how to have a conversation about the text*." –Grade 4 Teacher

These teachers suggested a need to incorporate more quality, open-ended discussions about the literature that could improve the students' comprehension skills, engagement, and relationship with reading books. They mentioned a need to supplement the small-group literacy practices with literature circles that could potentially spark deep comprehension and analytical thinking about the various texts students encountered in the classroom. The following teacher describes what literacy would ideally look like in her classroom:

> *"I think it should involve a lot of conversations. I want students talking about books. I want them talking about why they like the book or why they didn't like the book. I want them talking about the new facts that they learned. I want them talking about if they identify with the main character or not. In a way, it doesn't really sound like me talking to them. It sounds more like students talking to each other."* –Grade 5 Teacher

Some of the teachers remarked that the book selection for guided reading and shared reading activities was not interesting or engaging for students. The external literacy consultant remarked that she helped teachers select books based on particular reading strategies that teachers could model or how to select leveled readers that aligned to diagnostic data. This finding suggests that student interest or engagement were not a primary consideration for book selection during literacy instructional activities.

"I just don't feel like they're [leveled readers] *really engaging. There clearly have been books written specifically for instruction, which is good because they have particular skills I can teach. Again, it's hard to get a student excited about 'Rocks' and some of those 'Reading A to Z' books are a little dry."* –Grade 3 Teacher

Another sub-theme that stemmed from the teachers' interviews was a lack of flexibility for teachers to decide what literacy practices or programs would best meet the needs of their students. This finding suggests that leadership had a rigid or fixed concept of literacy that did not include input or perspectives from all the teachers. Additionally, these teachers implied that leadership was not receptive to alternate approaches to building student literacy. Although only four teachers expressed this sentiment, they seemed to profoundly feel that this process *"stifled teacher creativity and autonomy."* Table 13 lists a few teacher quotes that exemplify their challenges with implementing guided reading and small-group literacy instruction in their respective classrooms.

Table 13. Teacher Quotes on Lack of Flexibility with Literacy Practices

Interview	Teacher Quotes on a Lack of Flexibility with Literacy Practices
Special Education Teacher	*"I was not successful in negotiating shifts in my practice. For example, I don't think guided reading is appropriate for every student, and that's not exactly the same sentiments of the staff here, and so it's very challenging to give guided reading instruction to a student who doesn't have letter identification skills or letter sounds already mastered. There are other programs that I could use for students who are very low-functioning and who just don't respond well to this kind of structure* [guided reading]. *I wanted to kind of do like a whole word instruction program for my students, but that wasn't really well received. I wasn't very successful in negotiating some flexibility in my instruction."*
Grade 4 Teacher	*"So, I feel like you're never going to be a good reader if you're never reading, and I don't think here we give kids the opportunity to just read. I think a mixture of small-group, whole-group, and one-on-one works the best."*
Grade 5 Teacher	*"I've tried to tailor the instruction to fit the assessment, which really*

	drives me crazy when you're just teaching to a test, which is not what the world is like. But, yeah… I would say that there isn't a whole lot of room for a teacher to make it their own. I think it has improved a little bit, but it's still very rigid. They really want you to use the templates and follow their recommendations and there isn't a whole lot of room for making something your own."
Grade 4 Teacher	*"So, I've always sort of felt like I was kind of not trusted. I went to school, I read all of these books, I did a lot of research on my own, I tried a lot of different things with my kids, and I have data to prove that what I was doing was effective. It's been tough because there's just been a lot of head-butting with falling in line with what the district wants. I feel like it sort of stifles your creativity and autonomy as a teacher. I've always been more excited to teach things that I've come up with on my own or that I've been able to seek out. I'll come up with the idea and then all I need is somebody to kind of help me fine tune it. I've always felt like my students are more excited about the things that I'm teaching when I do that because I'm more excited about it. I feel like DCPS puts you into a box, and you have to teach the way that they want you to teach or it's not good teaching. It makes me less… I don't want to say inclined to do things, but I just don't take as much pride in what I do now and I did. I used to really enjoy teaching and the last couple of years it's sort of been, like well, just a lot of paperwork and testing that I don't feel is necessary. So it's been tough. Sarah* [external literacy consultant] *has been really good about hearing me out, but there's not a whole lot that she's able to do with the things that the district wants done. But it's been very difficult… I'm sort of like that oppositional person ... I just oppose that top-down kind of thing... I've always questioned those kinds of things… I like to have my own stuff instead of something that somebody else has created."*

Although some teachers expressed disagreement with school leadership's emphasis on reading fluency, small-group literacy instruction, and/or the guided reading program, the leadership team comprised of the principal, the literacy coach, and the external literacy consultant also had differing perspectives on the best approach to improve student literacy within the school. This finding indicates that the principal, literacy coach, and external literacy consultant may prefer different models of literacy instruction based on the grade levels they

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previously taught and the literacy practices and/or programs they implemented in the past. The

external literacy consultant describes the varying experiences and preferences for literacy

instruction among the school's leadership team.

> *"I think they do differ sometimes. For example, the principal came from a school that did a lot of readers and Writers Workshop so he likes that approach and thinks that's the best for kids. The literacy coach here taught a lot of upper grades, so I would say that his knowledge and opinions are sometimes grounded in those grades and focus more on close reading and it was hard for us to have certain conversations because he was unable to connect to what the children in lower grades should be learning so that they can develop basic building blocks of reading like tracking words, decoding, using pictures as text clues."* –External Literacy Consultant

CHAPTER 5. DISCUSSION

The purpose of this qualitative case study was to explore how instructional coaching and a professional learning community (PLC) led by an external literacy consultant supported teachers' data use and capacity to improve literacy instruction in an urban low-performing school. The previous chapter provided a detailed overview of teachers' perceptions of student assessment, data use, and literacy instruction after participating in a three-year professional development initiative. This chapter will summarize the findings in terms of the research questions. A macro-level discussion of instructional coaching as a vehicle for influencing teachers' data use and literacy practices follows, in which findings from this study will be used to address implications for potential educational improvement on the individual teacher level, school level, and scholarship on instructional coaching and teacher data use. Finally, limitations from the study will be discussed.

Summary of Findings

This section summarizes the emerging themes and findings from the study. The following research questions guided this study:

RQ1. How did elementary teachers perceive assessment after participating in a coaching project that focused on data-driven instruction in an underperforming urban elementary school?

RQ2. How did a PLC focused on data-driven instruction influence teachers' perceptions of literacy instruction in an urban underperforming school?

RQ3. How did teacher coaching provided by an external literacy consultant influence

teachers' perceptions of literacy instruction in an urban underperforming school?

Two major themes emerged from the study to address the first research question: 1)

Increased focus on student literacy assessment and 2) *Leadership's expectations for data use*.

The participants in the study perceived the literacy assessment system used during the Target

Literacy Initiative (TLI) helped teachers strategically use student data to improve literacy

instruction and student learning. Specifically, the mCLASS assessment system helped teachers

effectively and efficiently collect and access data and apply the information learned to

differentiate literacy instruction for students. The majority of teachers expressed data from

benchmark assessments and progress monitoring helped them identify students who needed

reading interventions, customize literacy instruction to students' learning needs, identify gaps in

students' literacy skills, and assign and reassign students to reading groups.

Another perceived benefit from using the assessment system was increased teacher

dialogue about student literacy data. This provided a coherent framework and common language

in which to understand and discuss student literacy and achievement within the school. Over the

course of the TLI grant, teachers developed a deeper understanding of early literacy skills and

reading behaviors. However, more than half of the teachers expressed the student assessment

system lacked flexibility and adaptability. Additionally, some teachers questioned the

appropriateness of some assessment measures for certain student groups, such as beginning

readers, students with special needs, and English Language Learners.

The principal and external literacy consultant perceived the teachers had become more

willing to collect and use student data to inform instruction and more comfortable with analyzing

and discussing student assessment data. However, a distinction was made between returning

teachers' and new teachers' ability to determine appropriate instructional responses based on assessment data. Toward the end of the grant, the leadership team observed teachers using student data to inform daily instruction, which was evidenced by teachers' lesson plans, literacy station activities, student reading groups, and guided reading instruction. Although leadership perceived teachers' increased use of and confidence around data-based decision making as contributing to a stronger school culture of data use during the grant, sustainability of intensive student testing and strategic data use after the initiative formally ends is in question.

Despite the reported increase in the teachers' use of data, six of the 15 teachers expressed difficulty with finding time to collect and analyze all the data. Additionally, these teachers indicated that students were assessed too frequently, which resulted in occasional inconsistencies in the data and insufficient time for students to learn, practice, and master literacy skills before being assessed. One-third of the teachers indicated that they also rely on their independent observations or anecdotal notes to understand students' learning needs. This finding challenges the predominant educational discourse that naturalizes the assumption that data generated by standardized assessments is the most valid way to judge student progress. These teachers may value the common sense assumptions or professional intuition that result from ongoing teacher-student interactions and informal observations.

Four teachers expressed concern about the school's preoccupation with student assessment data and student achievement. These teachers perceived the time and resources allocated to student literacy data collection and analysis as overemphasized and believed the full story of student growth and engagement with reading could not be captured by the assessment system. Overall, their comments reflected a belief that standardized testing and the practice of scrutinizing student data potentially has a dehumanizing effect. During the TLI grant, the school

adopted a discourse and practice of literacy measurement and quantification rather than an instructional approach that educated the whole child.

Two major themes emerged from the study to address the second research question: 1) Increased use of student literacy data and 2) Improved literacy practices through collaboration. Two-thirds of the teachers interviewed indicated the PLC led by the external literacy consultant provided opportunities for them to analyze and discuss a variety of data sources, such as Text Reading and Comprehension (TRC), DIBELS, running records, and the reading behaviors checklists. As a result, these teachers indicated a deeper understanding of how their students think and approach the reading process. Additionally, within the PLC teachers felt comfortable raising questions about their students' reading patterns, reading strengths, and learning challenges.

During the PLC meetings, data conversations mainly focused on low-performing students. Nearly half of the teachers discussed using assessment data to identify level bands of students and to target individuals and groups of students who needed reading interventions. These teachers indicated using PLC meetings to identify and group struggling readers who were well below benchmark goals and students on the cusp of reaching benchmark goals. Additionally, teachers used their time during PLC meetings to update and reflect on the data wall. Most teachers described the data wall as a useful tool that helped direct their attention to school-wide reading trends and student growth when exploring assessment results.

More than half of the teaching staff indicated the PLC meetings allowed them to learn best teaching practices from each other and the external literacy consultant. Specifically, the PLC meetings provided an opportunity for sharing resources, modeling instruction, and collaborative problem-solving among all the teachers. One-third of the teachers indicated the collaborative

sessions helped them be a reflective practitioner. These teachers indicated that the PLC meetings allowed them to ask critical questions about why and how they planned and delivered their reading instruction. An additional perceived benefit of the collaborative meetings included opportunities for teachers to challenge each other to improve their professional practice. Over time, teachers became less fearful opening up their literacy practices and student data to other teachers' questioning and feedback.

Overall, most of the teachers expressed being receptive to the professional development offered by the external literacy consultant. This finding may have been attributed to the external literacy consultant having built respectful and collaborative relationships with the teachers. Almost all of the teachers viewed the external literacy consultant as a data and literacy expert, which may have influenced their receptivity to her coaching support and facilitation of data conversations during the PLC. However, a few teachers expressed their lack of satisfaction with the PLC meetings because they did not have an opportunity to select meeting topics. Due to the intensive PLC meeting schedule, there was limited time for teachers to engage in other collaborative planning meetings, such as grade-level and other content-based meetings besides literacy. Additionally, two teachers expressed the PLC meetings lacked differentiation for those who were already experienced with implementing guided reading with their students.

Four major themes emerged from the study to address the third research question: 1) Improved approaches to literacy instruction, 2) Teachers attempted suggested instructional changes, 3) Emphasis on small-group literacy, 4) Leadership's expectations for literacy practices. Almost all the teachers agreed that instructional coaching offered them the ability to consider approaches to literacy instruction that they had not considered before. Seventy-five percent of the teachers indicated that the external literacy consultant helped them learn how to effectively

conduct guided reading. Additionally, several teachers attributed coaching to helping them understand a continuum of literacy behaviors that students should demonstrate within a guided reading level. As a result, these teachers indicated an improvement in making informed decisions about concrete literacy skills to explicitly teach in intensive small groups. Overall, almost all the teachers perceived student progress toward meeting mid-year and end-of-year reading goals as being an outcome of the instructional coaching they received.

A majority of teachers indicated that their literacy instruction shifted as a result of the instructional coaching their received from the external literacy consultant. During one-on-one coaching sessions, teachers received guidance on how to design and implement small-group instruction. Additionally, more than half of teachers stated that coaching helped them think about how to assign and reassign students to literacy groups based on assessment data and reading behaviors. During coaching sessions, the external literacy consultant supported teachers' understanding of students' reading difficulties and strengths and identified activities that could address student-learning needs. Overall, these teachers associated improvements in student learning to frequent regrouping of students and aligning literacy instruction to the reading skills and behaviors that students needed to develop.

Almost all of the teachers indicated that they attempted to change their literacy practices resulting from the direction they received during coaching sessions. Nine of the 15 teachers expressed the importance of remaining open-minded and flexible throughout the coaching process. Additionally, the principal and external literacy consultant attributed the teachers' coachability to developing a growth mindset in the teaching staff. Most of the teachers trusted the expertise and experience of the external literacy consultant, which may have influenced their openness to integrate her suggestions into their teaching practice. As result, most teachers were

willing to try new instructional strategies, take risks in the class, grow comfortable with using data and technology, and remain open to different professional learning experiences. Although a majority of teachers indicated a level of receptivity and adaptability to the coaching they received from the external literacy consultant, some teachers were resistant to the suggested instructional strategies she provided.

Almost all of the teachers reported that they implemented a small-group literacy approach consisting of guided reading and shared reading. These teachers perceived literacy instruction as a community activity within the classroom rather than an independent task. Additionally, teachers viewed literacy instruction to be varied and differentiated to student needs and focused on improving specific reading skills such as decoding, fluency, comprehension, and vocabulary building. Overall, teachers reported positive changes to their guided reading instruction resulting from the support they received from coaching. The principal and external literacy consultant reported observable improvements in how teachers used the 120-minute literacy block, evidenced by more detailed, intentional lesson plans for small-group literacy rotations. Additionally, teachers perceived students had an increased focus and enthusiasm for reading, writing, and small-group literacy activities.

During teacher interviews, nine out of 15 the teachers indicated attempting to align their literacy practices with leadership's expectations. To avoid potential conflict or a negative performance evaluation from the principal, teachers may have felt pressure to conform to the external literacy consultant's recommended literacy practices. This finding suggests that teachers may have perceived the external literacy consultant as being part of the leadership team. Additionally, teachers may have viewed suggested changes to their literacy practices during coaching sessions as directives that had to be followed. However, as teachers implemented

recommended strategies, many expressed that there was alignment between their own instructional practices and what the external literacy consultant proposed. This finding may reflect the time needed for teachers to understand and grow comfortable with the proposed changes to their literacy instruction over the course of the TLI implementation.

On one hand, some teachers valued the consistent literacy practices being implemented throughout the school, which supported horizontal and vertical alignment of literacy instruction. On the other hand, some teachers perceived the school's leadership as having a rigid or fixed concept of literacy that was not inclusive of all the teachers' perspectives. Consequently, these teachers viewed their creativity and autonomy as compromised. A small number of teachers expressed dissatisfaction with the leadership's perceived overemphasis on improving student fluency over reading comprehension. These upper-elementary teachers expressed a desire to integrate more quality, open-ended discussions about literature that could improve the students' comprehension skills, engagement, and relationship with reading books. They discussed s need to supplement small-group literacy practices with literature circles that could spark deep comprehension and analytical thinking about the various texts students encountered in the classroom.

Discussion of the Findings

The following section offers a macro-level discussion of instructional coaching as a professional learning strategy aimed at improving teacher's data use and literacy practices. Findings from this study will be used to address implications for potential improvement at the teacher level and school level. At the teacher level, considerations relating to teacher autonomy and teacher resistance will be examined. At the school level, the practice of student labeling and ways in which school leaders can develop a shared commitment to improvement will be

explored. Finally, the roles and responsibilities of instructional coaches and how data use can be a strategy to improve equitable learning outcomes for students will be addressed.

Teacher Autonomy

At the individual teacher level, findings from this study may inform how school goals around data use and improved literacy instruction can *honor* or *hinder* teacher autonomy. Gallatin Elementary School had a history of poor student performance in reading and, like many urban public schools that fail to meet accountability requirements, this fostered many policy mandates that governed teachers' instructional practice and dictated types of and focus for teacher development (Sleeter, 2008). Chronic underachievement contributed to a working environment in which teachers experienced increasing restrictions on their autonomy to make instructional decisions and limited their choice of professional learning opportunities.

In a study of the effects standardized exams have on teachers, teachers described how tests restrict teachers' autonomy and professional decision making (Martina et al., 2003). These teachers expressed significant frustration with creating and implementing innovative curricula within the context of high-stakes standardized tests. Specifically, teachers in the study articulated the pressure they felt to not diverge from the content and skills that were most likely included in the end-of-year state exam. Frequently, elementary and secondary teachers report that they devote increased time to teaching to the test and less time teaching subject areas and content that are not included in standardized tests.

Based on the findings, teachers who perceived their autonomy as being constrained through the school's data-driven practices believed they had limited input or influence on the literacy practices they could implement in their classroom. Although Gallatin teachers engaged with data to identify and rectify student-learning challenges and to generate instructional decisions and next steps based on the data, teachers had limited autonomy on selecting the types

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of data collected and analyzed and the frequency of data collection. In almost all cases, the teachers perceived the data-use processes and outcomes in the school to be prescribed by the external literacy consultant or school leadership. Due to the parameters of the Target Literacy Initiative, the types of assessment and reading curriculum used were predetermined.

Ultimately, the aim of data use, the manner in which student data were interpreted, and the possible instructional decisions made with data were mainly determined by outsiders for teachers, not by the teachers at Gallatin. Further research is merited to not only understand the school conditions that *support* teachers' data-driven instruction but also the factors that *stifle* teachers' data use and instructional responses to student data. In the case of Gallatin, specific policies and practices limited the ways in which teachers could use data and ways in which literacy instruction was implemented. This means researchers must consider what is possible for teachers based on the data and reading curriculum they have access to, resources available to them within the school, and the power afforded to them to make instructional decisions given the school's norms and educational reform agenda.

Teacher Resistance

Instructional coaching in literacy has emerged as a professional development strategy to help teachers build the requisite knowledge and skills to teach reading and ultimately improve students' performance on standardized reading tests. Although findings from this research indicate that most teachers valued the support, guidance, and feedback they received from the external literacy consultant, five teachers struggled with or even against the instructional directives being imposed on them. The case of Gallatin demonstrates the importance of teacher receptivity to instructional coaching. However, a deeper examination of factors that influence teachers' responsiveness and resistance to collaborating with a coach is needed to improve the implementation and process of teacher coaching.

Research on instructional coaching has indicated teacher resistance can be a considerable challenge to overcome. Jacobs et al.'s (2018) study suggested that the one-on-one model of instructional coaching may not be the best fit for all teachers. The study identified three main categories of teacher resistance: 1) teachers who do not make time for coaching interactions, avoid meeting with the coach, and are reluctant to let the coach in their classroom; 2) teachers who do not value or negatively perceive the model of reading instruction used; and 3) teachers who do not implement the coach's feedback for improving literacy instruction. In the case of Gallatin, resistant teachers expressed sentiments that aligned with all three categories, however the most common form of teacher resistance pertained to not integrating the external literacy consultant's feedback into their reading instruction.

Even though most of the 15 teachers interviewed expressed that a relationship of mutual respect and trust was established with the external literacy consultant, a small number of teachers appeared resistant to implementing suggested literacy practices. On one hand, some teachers may have rejected the normative discourse of a correct method of teaching reading dictated by an external expert, choosing to value their local knowledge of literacy instruction instead. On the other hand, some teachers may appear to comply with the school's normative literacy practices but maintain their own personal beliefs about teaching practices. Further research should examine how power is constructed, leveraged, and perceived in teacher-coaching relationships.

Another factor that may have contributed to teacher resistance was the school's overreliance on data from standardized tests. During the three-year grant, teachers and students were inundated with assessments and literacy data. Teachers may have perceived that the abundance of assessment data that they had to collect, analyze, and discuss was intended to supplant their teacher intuition. At Gallatin, teachers frequently expressed *"knowing"* their

students' abilities, needs, background, skills, and previous schooling experiences based on their relationships with students, daily interactions, and observations of students' learning. However, over the course of the literacy initiative, overt and veiled messages were constructed that privileged instructional decisions based on data generated from formal assessment instead of teachers' professional judgment. Ideally, teachers should use a wide variety of data to make informed instructional decisions; this should include teachers informal observations and professional intuition. Research on how assessment data is used to enhance teachers' professional judgment should be explored further. Additionally, studies should examine the types of data teachers perceive as high quality and most beneficial in comparison to the set of data schools and districts hold in high esteem.

Student Labels

At the school level, findings from this study have implications for supporting teachers' interpretation of student data. Research has shown that teachers' sense-making of student assessment data or the way in which teachers explain the root causes of student performance can influence how teachers label and group students. Teacher sense-making is important to consider due to the potential impact data-use practices have on some student groups, such as English Language Learners, students with special needs, and low-performing students (Bertrand & Marsh, 2015). How teachers attribute student-learning outcomes is especially significant, because it can impact their instructional responses to data and expectations for student performance. Based on the interview data and data tools used in the school, such as the data wall and data trackers, teachers, school leadership, and the external literacy consultant routinely labeled and grouped students using a color-coding system.

Although the school used a data-management system, mCLASS, that aggregated and analyzed student literacy data from multiple sources, the school also used a color-coding system

to support teachers' interpretation of TRC and DIBELS assessment data. Research has shown that students benefit when schools use advanced data-management systems that support teachers' data interpretation (Lachat & Smith, 2005; Mandinach, 2012), however, in the case of Gallatin Elementary School, the external literacy consultant and teachers referenced the color-code system as being helpful for organizing and visualizing the student data and providing teachers an opportunity to physically manipulate the student data to group students. Although the color-code system may be an oversimplified framework for assessment and data use, the mCLASS data management system may have been overly complicated and removed the teachers from the data-interpretation process due to the automation.

Low-performing students who are not meeting benchmark goals are often the target of aggressive accountability policies and data-use directives. Within benchmark grades, schools frequently target "bubble kids" (Ho, 2008). The "bubble kids" represent the students who score right below the passing cut-off score. More often than not, accountability systems drive schools to prioritize and cherry pick students who are further beneath the cut-off, with the intention that the school will meet the accountability goals if low-performing students get over the passing threshold (Brathwaite, 2016). In the case of Gallatin, the color-coded data became a student label that represented students' literacy abilities and their membership to a student group receiving uniform instruction and reading interventions. This label was especially significant for red-coded students, who were frequently described as *"low-performing," "low-achievers," "struggling readers,"* and *"at-risk for failure."* Red-labeled and yellow-labeled students were discussed more often during the PLCs and teacher coaching sessions. Additionally, these students were subject to more frequent testing and had more prescribed reading interventions. This form of

data-driven literacy instruction, where the outcome is labeling and grouping students, warrants further investigation.

Although studies on data-driven decision making suggest that the use of color-codes to emphasize low-performing students' data commonly occurs in PK-12 public schools (Marsh, 2012), research on labeling theory suggests that these forms of student categorization can be detrimental. Most likely, the teachers and the external literacy consultant viewed the practice of assigning a red label to low-performing students as a helpful strategy for creating reading groups and focusing data conversations. However, Earl (2009) and Barrett (2009) indicated that student assessment data that emphasized students' deficits can confirm and/or promote negative perceptions of students. By providing evidence that students are "low achievers," student assessment data can create educational barriers. The label of "at risk," which is used prevalently in the DIBELS assessment literature, does not automatically translate into additional support, increased educational opportunities, or rich learning experiences for low-performing students (Boykin, 2000).

Shared Commitment to Improvement

Findings from this study have implications for how school leadership can create an explicit, shared purpose for data use to improve student literacy. Park, Daly, and Guerra (2012) found that school leaders could influence teachers' data use through strategic framing. Specifically, school leadership can convince teachers of the relevance of using student assessment data for improving literacy instruction by intentionally framing data use as a method to confront student achievement and opportunity gaps, a strategy for promoting shared collective responsibility for school improvement, and a practice that supports the creation of common student growth goals and progress monitoring of student learning.

Research on data-driven instruction suggests schools need a shared aim for data use (Hargreaves & Braun, 2013). In the case of Gallatin, the principal, with the help of the external literacy consultant, created a school culture of data use by clearly articulating a shared vision, norms, goals, and expectations for data use. For example, the principal established measurable, school-level literacy goals in the form of Chancellor Goals, which invested all teachers in a collective aim. Additionally, the school-level literacy goals were routinely discussed during professional development meetings. Marsh et al. (2006) found that teachers used data more frequently in schools where principals had a clear vision about data use at the school level and a shared understanding for desired outcomes. This sense of collective purpose can prevent the pitfall that the school's aim is to become merely "data-driven," because it's the latest education reform craze.

The external literacy consultant reinforced meeting norms, such as *"be achievement-focused," "have a growth mindset,"* and *"be collaborative"* during her group coaching interactions with teachers. These meeting norms helped to create a school climate that involved continuous inquiry, learning, and instructional improvement based on data rather than using data to place blame (Faria et al., 2012; Schildkamp & Kuiper, 2009; Wayman & Stringfield, 2006). The school was also characterized by openness and a sense of collaboration around data use, in contrast to schools where data analysis might be perceived as an individual activity. By establishing explicit aims for data use, many teachers attributed meaning to the practice instead of being passive participants in the process, where teachers perform a set of steps out of compliance instead of acting with purpose (Timperley & Earl, 2009; add Fives citation).

Not every teacher perceived the school's approach to student assessment, data use, or literacy instruction the same way, nor should they. In general, Gallatin employed a "sort and

support" model of data-driven literacy instruction, where students were classified by data-driven labels, placed in student reading groups, and offered a prescribed reading intervention that corresponded to their color-code label. The school operated with the assumption that using various data sources (DIBELS, TRC, reading behaviors checklist) to match students to a Guided Reading curriculum would result in improved student test scores. Further research is needed to determine if this is an appropriate or the most effective practice of data-driven literacy instruction, particularly for urban low-performing schools.

Important considerations for future research on data-driven literacy instruction relate to ideal aims, practices, and outcomes for teachers' data use. Given the diversity of educational contexts, educational reform efforts, policy mandates, teaching conditions, and students, a universal vision for ideal data-driven literacy instruction may be unattainable. However, research should continue to offer insights on how teachers' data use can enhance the quality of literacy instruction and learning experiences for students, particularly minority students in under-performing schools.

Time Coaches Spend on Activities

Findings from this dissertation contribute to existing scholarship on the implementation of instructional coaching to improve teachers' data use and literacy practices. Marsh et al. (2010) found instructional coaches in low-performing schools were more likely to spend large amounts of time analyzing and helping teachers understand and use data to inform instruction than their counterparts in high-performing schools. Because low-performing schools often have more students with reading difficulties, wider achievement gaps, and more students placed in intensive reading programs that require frequent assessment, instructional coaches in these schools have more assessment data to work with and increased pressures to use data to improve instruction and student-learning outcomes. This was the case at Gallatin.

Instructional coaches divide their time among a wide range of activities, and supporting teachers with data may be one of many activities to which coaches devote their time within a school. Coaches often spend more time administering and coordinating student assessments than helping teachers analyze and use data to inform instruction. In the case of Gallatin, some teachers expressed that the PLC meetings frequently focused on the organization, process, and schedule for progress monitoring instead of actively engaging teachers in the data interpretation process.

The external literacy consultant indicated that her responsibilities in the school included: working with individual teachers one-on-one on their literacy instruction, conducting classroom observations during the literacy instruction, scheduling debriefing sessions to provide instructional feedback to teachers, modeling and co-teaching literacy instruction, administering and coordinating student assessments, training teachers on how to analyze and use student data to inform literacy instruction, managing literacy resources and materials, planning professional development meetings, and working with groups of teachers on their literacy instruction. Of all of these activities, teachers in the study most valued when the external literacy consultant modeled literacy instruction with students in their respective classrooms. However, this coaching activity did not regularly occur at Gallatin.

Research is needed to further differentiate the roles and responsibilities of instructional coaches in low-performing schools and high-performing schools. Additionally, education researchers should explore which coaching activities are perceived by teachers as being the most valuable for improving their literacy practice. Similarly, the frequency and the amount of time instructional coaches spend with teachers on specific coaching activities should be examined to develop a clearer understanding of how they might impact changes in teaching practice.

Equitable Learning Outcomes for Students

Gallatin Elementary School historically struggled to create equitable learning outcomes for students. When the fate of individual students, teachers, principals, and schools rests on the results of a high-stakes, standardized assessment, that exam becomes the center of teaching and learning within the school. This is especially the case for low-performing schools serving low-income students of color (Lipman, 2006). McNeil's (2000) ethnographic account of Houston high schools paints a clear picture that standardized testing reforms degrade the work of the best teachers, forcing them to teach diluted content. Furthermore, they provide little help to the weakest teachers, because it does not improve their knowledge, skills, or commitment to provide richer and rigorous teaching and learning experiences to our students most in need of a high-quality education. Ultimately, high-stakes testing often disadvantages the most disadvantaged students in low-achieving schools by limiting their education to the tasks that are tested, concentrating the majority of class time on test-taking skills, and reducing learning to passing standardized test. Conversely, high-scoring schools are relatively free to create a richer, more holistic, and less test-driven curriculum. These are examples of how standardized testing and accountability systems mandated by NCLB potentially perpetuate educational inequity and may widen disparities in students' educational experiences (Lipman, 2006; McNeil, 2000).

Studies on data use highlight the essential purpose is to increase equitable educational opportunities and outcomes for all students (Bertrand & Marsh, 2015; Park, 2018). This body of research emphasizes educators' values and school leaders' capacity to invest the teaching staff in the aim of equity. This involves providing a framework and developing a mindset for using data tools and strategies as levers for creating equitable learning outcomes. Cases from these studies suggest that when educators strive for equity, they use a wide range of data sources and interpret data in light of particular values and ideologies. For instance, school leadership and educators

would need to go beyond examining student achievement data by creating equity linkages to other data points, such as students' attendance, suspension and expulsion rates, graduation rates, over-representation of minority students in special education, and under-representation of minority students in honors and advanced placement classes. Additionally, exposing racial disparities may not lead to any profound change in educators' beliefs or practices in the absence of examining the underlying ideologies, structures, school norms, policies, and dominant assumptions that lead to marginalization and low-achievement of students of color, immigrants, special needs students, and English language learners.

Conversations about student data matter, because they have the potential to influence how educators make sense of student learning and whether they contribute to instructional improvements or further educational inequities. There are other measures of equity related to student achievement other than test scores. In the case of Gallatin, root causes of the school's achievement gap were not discussed during PLC meetings. These teacher meetings could have been ripe forums to examine particular school-wide policies, norms, and practices that reinforce inequities for certain students. Teachers' data conversations cannot be limited to just numbers; it must involve a holistic approach that factors in students' social and emotional needs. For example, during the PLC meetings, educators rarely discussed how students were experiencing and making sense of the increased testing culture within the school and how test-driven culture impacted their curriculum and learning experiences. Conversely, the PLC meetings appeared to be dominated by adult perspectives, mainly how teachers were adapting to the testing culture and accountability system within the school and district.

Overall, in Gallatin leadership did not articulate any equity frames for understanding student literacy data. Furthermore, they did not push data conversations to extend beyond the

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focus of raising student achievement for the purpose of school improvement. During the teacher interviews, the special education teacher and the English for Speakers of Other Languages (ESOL) teacher at Gallatin questioned if the school's assessments were valid measures for the special needs students and English Language Learners. Additionally, they expressed their concerns about the appropriateness of the school's reading curriculum and literacy practices for the students they served. A few other teachers remarked about the school's excessive dependence on standardized assessment data to the exclusion of other influential variables that may contribute to achievement gaps.

Existing literature on data-focused PLCs reveal that several conversation frames are commonly used: confirming and disconfirming frames where student performance data are used to prove or disprove teachers' assumptions and make generalizations about students' reading abilities (Horn et al., 2015; Park, 2018). Many educators believe that achievement gaps among groups are inevitable due to inadequacies in a student's culture and community and socioeconomic status of the family. In a recent study, Park (2018) investigated how teachers examined student-learning data and ways in which data conversations shifted teachers away from deficit-thinking and toward assets-based thinking and inquiry stances. A closer examination of how data conversations unfold in coaching interactions and professional learning settings is needed (Little, 2012).

Many studies on data-driven decision making do not have an equity focus, and additional research is warranted to study how data use can be a lever for equitable school reform. Disaggregation of test data by race, as required by NCLB, does not necessarily lead to educational improvements for children of color. In fact, there is evidence that it may intensify institutional racism and racialized blame because teachers and parents may blame minority

students for bringing down school tests scores (Lipman, 2006). Consequently, researchers should attend to how student data is used to confirm or challenge teachers' biases and assumptions. Future studies on data use should explore how school leaders, instructional coaches, and educators use data to identify and address systemic issues and structural inequities in the learning environment. Instructional coaches can have a considerable influence on teachers' practices and perceptions. Additional research is needed to explore how coaches with an equity orientation can shift teachers' data conversations away from students' learning difficulties and deficits and toward students' learning abilities and strengths. Paying particular attention to coaches' conversation moves, such as questioning techniques and strategic framing that facilitate teachers' data use for inquiry. School leaders and instructional coaches have an important role in creating a culture of inquiry in which teachers feel supported to analyze data, ask questions, look for answers, probe perceptions, and examine the learning environment, and discuss openly issues of access, equity, and opportunities for student to experience learning success.

Limitations of the Study

For this study, teachers, a literacy coach, an external literacy consultant, and a school principal were interviewed to learn how their beliefs and attitudes regarding student assessment, data use, and literacy instruction changed after participating in an intensive coaching program. The participants' testimonials provided a retrospective of the coaching experience they encountered during a three-year grant to improve literacy practices and test outcomes. Additionally, observation field notes of PLC meetings, classroom literacy instruction, and one-on-one coaching sessions with teachers provided complementary data to the interviews. The data used to answer the research questions were mainly from participant interviews. However, the information gathered from observations, documents, and artifacts was used to confirm themes that emerged from the interview data.

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Due to the small size of the study, the results are not generalizable. This study took place in a small, urban public school in Washington, DC, and is limited to the unique characteristics of the school, participants, and factors associated with the Target Literacy Initiative. The study does not include student achievement data; instead it focuses on teachers' perceptions. It is possible that even though the participants may have perceived an increase in data use, quality literacy instruction, and improved student learning, increases in student achievement may not be statistically significant. Another limitation to this research project is that a small number of teachers were observed delivering reading instruction and participating in one-on-one coaching sessions with the external literacy consultant. These teachers were selected using reputational case sampling, because the principal and external literacy consultant indicated that they needed additional support. A limitation pertaining to the data collection is related to interviewing and observing participants toward the end of the TLI grant. It is feasible that the participants' perceptions of assessment, data use, and literacy instruction could have varied from year to year. Additionally, the external literacy consultant's interactions and relationships with the teachers and the leadership team could have changed over the three years.

More studies in varying school contexts are warranted to expand our understanding of the role instructional coaching has on changing teachers' perceptions and practices. Further research is needed to develop a clear and complete picture of teacher coaching and how it can impact teaching and learning. Although this study heavily depended on participant interviews, observations of coaching interactions should be investigated more deeply, paying particular attention to the language used and conversational dynamics that take place.

Conclusion

The majority of teachers believed student learning improved with the instructional coaching provided through the TLI grant. Teachers gauged improvement to student learning in

two main ways: experientially and based on evidence from assessments administered to the students. Teachers shared various stories about how student scores improved on the TRC and DIBELS assessments and how students advanced to higher guided reading levels throughout the year. These teachers perceived improvements to student learning as being linked to the instructional coaching they received from the external literacy consultant. Additionally, the principal described observable changes in the teachers' literacy instruction as a result of the coaching.

Most of the participants perceived teachers' literacy knowledge had increased and the quality of literacy instruction had improved from the school's coaching program. The external literacy consultant and principal indicated that various literacy strategies for supporting students' phonics, fluency, and comprehension were applied during reading instruction. Also, the adoption of the 120-minute literacy block, small-group literacy, and a guided reading program in the teachers' daily practice indicated that the literacy initiatives led by the external literacy consultant were being implemented throughout the school. Additionally, teachers conveyed an increased sense of confidence in their ability to provide effective guided reading instruction.

Another benefit of the coaching program was increased professional dialogue and collaboration among the teachers and the external literacy consultant. During the PLC meetings and one-on-one coaching sessions, most teachers indicated that they felt supported and safe when sharing their classroom challenges and specific concerns with students' progress. My observations confirmed that teachers openly asked questions about the assessments, student data, and literacy strategies. Additionally, I observed teachers offering assistance to one another and providing practical strategies to try during small-group literacy activities. The PLC also served as a vehicle to connect teachers to the collective purpose of raising students' reading test scores.

Most likely, the level of collaboration, trust, and openness among and between the teachers and the external literacy consultant was not instantaneous and took considerable time to build over the three-year coaching program. All in all, the teachers expressed sharing ideas and best practices for literacy instruction as well as lending a listening ear were advantages of instructional coaching. However, in many cases, and much like Gallatin, schools may develop an overdependence on coaches to do the thinking work and prescribe instructional solutions for teachers to implement in the classrooms. This begs the question, *"What happens when the instructional coaches leave?"* Studies on the sustainability of data use and instructional practices after teacher coaching concludes is needed.

APPENDIX A: TEACHER INTERVIEW GUIDE

Research Questions	Interview Questions
Teacher Information	1. How long have you been a teacher? 2. How long have you been a teacher at Gallatin Elementary School? a. Please identify the grade level/subject area you teach? 3. How long have you provided literacy instruction to students?

RQ1. What, if any, coaching practices are effective in building teachers' capacity to understand and use data to inform literacy instructional practices in classrooms serving mostly African American and Latino/a students?	4. In your opinion, what was the *goal/purpose* of the coaching activities you participated in with the external literacy consultant?
	5. What type of one-on-one coaching activities did you participate in with the external literacy consultant?
	   a. The external literacy consultant *modeled literacy instruction*
	   b. The external literacy consultant *observed your literacy lesson*
	   c. The external literacy consultant *provided feedback and shared expertise* about instructional strategies or data use
	   d. The external literacy consultant *demonstrated data analysis*
	   e. *Co-planned* a literacy lesson with the external literacy consultant
	   f. *Co-taught* a literacy lesson with the external literacy consultant
	   g. *Dialogue and questioning* were components of a coaching activity
	6. How often did you participate in one-on-one coaching activities with the external literacy consultant?
	7. Describe your working relationship with the external literacy consultant?
	   a. Did your working relationship with the external literacy consultant change over the three years *(depends on teacher's number of years at the school)*?

RQ1.1. How, if at all, does coaching build teachers' capacity to understand and use student literacy data to drive instructional improvement?	8. What, if any, coaching activities were most helpful to you in learning how to use student assessment data to improve literacy instruction? a. Please provide examples of how coaching has helped you better understand and use student assessment data? 9. What coaching activities were the least effective in helping you understand and use student data to inform literacy instructional practices?
RQ1.2. How, if at all, does coaching improve teachers' literacy instruction?	10. Overall, how, if at all, has coaching helped you improve your literacy instruction? a. Please provide examples of changes to literacy instruction? 11. What evidence do you have that any instructional changes that you implemented due to

	coaching has enhanced student learning and/or student reading proficiency? 12. How, if at all, could the coaching activities been improved?

How, if at all, does a professional learning community led by an external literacy consultant support teachers' data-driven literacy practices in classrooms serving mostly African American and Latino/a students?	13. In your opinion, what was the *goal/purpose* of the professional learning community you participated in with the external literacy consultant?
	 14. How often did you participate in professional learning community led by the external literacy consultant?
	 15. How, if at all, did you communicate to the external literacy consultant the areas of support you needed regarding using literacy assessments, understanding student data, and modifying literacy instruction?
	 16. How would you describe the external literacy consultant's role in facilitating conversations or teacher thinking about student data in the professional learning community?
	 17. What, if any, are the benefits of examining and discussing student data in a group setting with other teachers?
	 18. How, if at all, has the creation and use of *data wall* informed your understanding student literacy at the classroom-, grade, and school-level?
	    a. Was this a beneficial learning tool?
	 19. How, if at all, did the use of *"data trackers"* help you collect and assess student literacy strengths and weaknesses within your classroom?
	    a. Were the data trackers are useful tool?
	 16. Please describe your experience using the *MCLASS data management platform* to access and organize student literacy data?

What role, if any, does a data-centered professional learning community have in building teachers' capacity to understand and use student literacy data?	20. Please tell me about any experiences or activities that you engaged in during the professional learning meetings that were most helpful to you in learning how to use and understand student assessment data?
	    a. Please provide examples of how the professional learning community helped you better use and understand student assessment data?
	 21. Since participating in the professional learning community led by the external literacy consultant, how, if at all, have you developed or improved the following DDDM skills:
	    a. Accessing, collecting, and organizing student data *(Provide examples)*
	    b. Analyzing and interpreting student data *(Provide examples)*
	    c. Combining student information with you understanding of literacy instruction

	(Provide examples)
	    d. Knowing how to respond and modify instruction based on student data (*Provide examples*)
	    e. Evaluating the effectiveness/outcomes of instructional responses to student data (*Provide examples*)
	 22. Overall, how, if at all, has the professional learning community helped you improve your data use?

What role, if any, does a data-centered professional learning community have in supporting teachers in making instructional responses to student literacy data?	23. What are examples of instructional responses in your classroom that you made based on student literacy data?
	    a. Please provide examples of changes to literacy instruction?
	    b. Please explain the role, if any, the professional learning community played in improving your literacy instruction?
	 24. Overall, how, if at all, has the professional learning community helped you improve your literacy instruction?
	 25. What evidence do you have that any instructional changes that you implemented due to the PLC has enhanced student learning and/or student reading proficiency?
	 26. How, if at all, could the professional learning community been improved?

How do teachers' beliefs and attitudes about student data use influence their data-driven literacy practices in classrooms serving mostly African American and Latino/a students?	27. How would you describe the school culture around using student data? 28. How, if at all, has the principal supported you and other teachers in using student assessment data to inform your instruction? 29. What types of support would you like to have that will help you understand and use student data more effectively? 30. In general, what is your opinion of the professional learning opportunities offered to you that focus on data use and literacy instruction? 31. Based on your experience, how do you think using student assessment data can help improve literacy instruction? 32. What, if any, are your concerns about the data-driven decision making process/practices at this school? a. Do you think the data-driven decision making practices at this school are sustainable after the Target Literacy Grant ends and the external literacy consultant leaves? 33. Do you feel confident that you can positively impact student learning through systematic/strategic data use?

APPENDIX B: PRINCIPAL INTERVIEW GUIDE

Research Questions	Interview Questions
Principal Information	1. How long have you been a principal? 2. How long have you been a principal at Gallatin Elementary School? 3. Please describe the goals and objectives of the Target Literacy Grant? 4. Please describe the role and responsibilities of the External Literacy Consultant?

What, if any, coaching practices are effective in building teachers' capacity to understand and use data to inform literacy instructional practices in classrooms serving mostly African American and Latino/a students?	5. In your opinion, what was the *goal/purpose* of the coaching activities provided to teachers by the external literacy consultant?
	6. Please describe the type of one-on-one coaching support that teachers received from the external literacy consultant?
	   a. *Modeled literacy instruction* to a teacher
	   b. *Observed a teacher's literacy lesson*
	   c. *Provided feedback and shared expertise* about instructional strategies or data use
	   d. *Demonstrated data analysis*
	   e. *Co-planned* a literacy lesson with a teacher
	   f. *Co-taught* a literacy lesson with a teacher
	   g. *Dialogue and questioning* with a teacher about their instructional practice, instructional responses, and/or understanding of student data
	7. How often were one-on-one coaching activities provided to teachers?
	8. How would you describe the working relationship between the various teachers and the external literacy coach?
	   a. In your opinion, has the working relationship changed over the three years of the grant?

How, if at all, does coaching build teachers' capacity to understand and use student literacy data to drive instructional improvement?	9. What, if any, coaching activities were most helpful to teachers in learning how to use student assessment data to inform literacy instruction? a. Please provide examples of how coaching has helped teachers better understand and use student assessment data to inform literacy instruction? 10. What coaching activities were the least effective in helping teachers understand and use data to inform literacy instructional practices?
How, if at all, does coaching improve teachers' literacy	11. In your opinion, how, if at all, has coaching helped to improve teachers' literacy instruction? a. Please provide examples of changes to teachers' literacy instruction?

instruction?	b. Please explain the role coaching played in improving teachers' literacy instruction? 12. What evidence do you have that any instructional changes that were implemented due to coaching has enhanced student learning and/or student reading proficiency? 13. How, if at all, could the coaching activities been improved?

How, if at all, does a professional learning community led by an external literacy consultant support teachers' data-driven literacy practices in classrooms serving mostly African American and Latino/a students?	14. In your opinion, what was the *goal/purpose* of the teacher professional learning community led by the external literacy consultant?
	15. How, if at all, were teachers' learning needs pertaining to their data literacy and/or literacy instructional practices assessed?
	16. Did you participate in the professional learning community?
	    a. If yes, what was your role in the professional learning community?
	17. What, if any, are the benefits of teachers' examining and discussing student data in a group setting?
	18. How, if at all, has the creation and use of the *data wall* informed teachers' understanding of student literacy at the classroom-, grade-, and school-level?
	    a. Was this a beneficial learning tool?
	19. How, if at all, did the use of formative *"data trackers"* help teachers' collect and assess student literacy strengths and weaknesses within their classroom?
	    a. Were the data trackers are useful tool?
	16. Please describe how teachers used the *MCLASS data management platform* to access and organize student literacy data?
	    a. Was this an effective and efficient platform for organizing student assessment data?
	    b. Did teachers have sufficient training in learning how to access and use the data management platform?

What role, if any, does a data-centered professional learning community have in building teachers' capacity to understand and use student literacy data?	20. Please tell me about any experiences or activities within the professional learning community meetings that you thought were most helpful to teachers in learning how to use and understand student assessment data?
	    a. Please provide examples of how the professional learning community helped teachers use and understand student assessment data?
	21. How has the professional learning community helped teachers develop or improve the following DDDM skills:
	    a. Accessing, collecting, and organizing student data *(Provide examples)*
	    b. Analyzing and interpreting student data *(Provide examples)*
	    c. Combining student information with you understanding of literacy instruction

	(Provide examples) d. Knowing how to respond and modify instruction based on student data (*Provide examples*) e. Evaluating the effectiveness/outcomes of instructional responses to student data (*Provide examples*) 22. Overall, what progress or gains have you observed over the three years in teachers' data use knowledge or skills?

What role, if any, does a data-centered professional learning community have in supporting teachers in making instructional responses to student literacy data?	23. Overall, how, if at all, has the professional learning community helped teachers' improve your literacy instruction?
	    a. Please provide examples of changes to teachers' literacy instruction?
	    b. Please explain the role, if any, the professional learning community played in improving teachers' literacy instruction?
	24. What evidence do you have that any instructional changes that teachers implemented due to the PLC has enhanced student learning and/or student reading proficiency?
	25. How, if at all, could the professional learning community been improved?

How do teachers' beliefs and attitudes about student data use influence their data-driven literacy practices in classrooms serving mostly African American and Latino/a students?	26. How would you describe the school culture around using student data?
	    a. How did you influence/create the school's culture around data use *(i.e. vision, norms, school-, grade-, and classroom-level goals)?*
	    b. How has the school culture around data use changed in the past three years since the grant?
	27. As the principal, describe how you supported teachers' data use?
	28. As the principal, how did you support efforts to develop teachers' capacity to understand and use student assessment data?
	29. What, if any, are your concerns about the data-driven decision making practices at this school?
	    a. Do you think the data-driven decision making practices at this school are sustainable after the Target Literacy Grant ends and you leave?
	30. What were some of the barriers to teachers' effective data use?
	31. Did you observe any resistance, opposition, or skepticism from teachers regarding coaching support?
	    a. If yes, please explain why?
	    b. How was it addressed?
	32. Did you observe any resistance, opposition, or skepticism from teachers within the

	professional learning community?
	   a. If yes, please explain why?
	   b. How was it addressed?

APPENDIX C: EXTERNAL LITERACY CONSULTANT INTERVIEW GUIDE

Research Questions	Interview Questions
Literacy Coach Information	1. How long have you been a literacy coach/instructional coach? 2. How long have you been an external literacy consultant at Gallatin Elementary School? 3. Please describe the goals and objectives of the Target Literacy Grant? a. How wasGallatin Elementary School selected to be a part of the Target Literacy Grant? 4. Please describe your role and responsibilities as the external literacy consultant.

What, if any, coaching practices are effective in building teachers' capacity to understand and use data to inform literacy instructional practices in classrooms?	5. In your opinion, what was the *goal/purpose* of the coaching activities you provided to teachers?
	6. Please describe the type of one-on-one coaching support you provided to teachers?
	    a. *Modeled literacy instruction* to a teacher
	    b. *Observed a teacher's literacy lesson*
	    c. *Provided feedback and shared expertise* about instructional strategies or data use
	        i. What did these debriefing sessions look like?
	    d. *Demonstrated data analysis*
	    e. *Co-planned* a literacy lesson with a teacher
	    f. *Co-taught* a literacy lesson with a teacher
	    g. *Dialogue and questioning* with a teacher about their instructional practice, instructional responses, and/or understanding of student data
	7. How often did you provide one-on-one coaching activities to teachers?
	8. Describe your working relationship with the various teachers you coached in the school *(Please comment on levels of trust, respect, willingness)*?
	    a. How, if at all, did your working relationship change over time?

How, if at all, does coaching build teachers' capacity to understand and use student literacy data to drive instructional improvement?	9. What, if any, coaching activities were most helpful to teachers in learning how to use student assessment data to inform literacy instruction? a. Please provide examples of how coaching has helped teachers better understand and use student assessment data to inform literacy instruction.
How, if at all, does	10. Overall, how, if at all, has coaching helped to improve teachers' literacy instruction?

coaching improve teachers' literacy instruction?	a. Please provide examples of changes to teachers' literacy instruction. b. Please explain the role coaching played in improving teachers' literacy instruction. 11. What evidence do you have that any instructional changes that were implemented due to coaching has enhanced student learning and/or student reading proficiency? 12. How, if at all, could the coaching activities been improved?

How, if at all, does a professional learning community led by a literacy coach support teachers' data-driven literacy practices in classrooms?	13. In your opinion, what was the *goal/purpose* of the professional learning community you facilitated with Garrison literacy teachers?
	14. How did you assess teachers' learning needs pertaining to data literacy and/or literacy instructional practices?
	    a. What was the purpose of the teacher self-assessments?
	    b. How were they used to inform/plan teacher support?
	15. How often did you lead the professional learning community?
	16. What, if any, are the benefits of examining and discussing student data in a group setting with other teachers?
	17. How did you help facilitate teachers' data conversations or teacher thinking about student data in the professional learning community?
	    a. What were some of your observations about the quality of teachers' data conversations?
	    b. Based on your observations of teachers' data conversations, did teachers' demonstrate a deep understanding of how to analyze, interpret student assessment data, and make connections to appropriate instructional responses?
	18. How, if at all, has the creation and use of the *data wall* informed teachers' understanding of student literacy at the classroom-, grade-, and school-level?
	    a. Was this a beneficial learning tool?
	19. How, if at all, did the use of formative *"data trackers"* help teachers' collect and assess student literacy strengths and weaknesses within their classroom?
	    a. Were the data trackers are useful tool?
	    b. Were the data trackers readily used and referred to by teachers?
	    c. What, if any, changes would you make to teachers' formative assessment methods to ensure meaningful student data is collected and analyzed?
	16. Please describe how teachers used the *MCLASS data management platform* to access and organize student literacy data?
	    a. Was this an effective and efficient platform for organizing student assessment data?

	b. Did teachers have sufficient training in learning how to access and use the data management platform? c. What if any changes would you make to the MCLASS platform to ensure more meaningful student literacy data is collected and represented?

What role, if any, does a data-centered professional learning community have in building teachers' capacity to understand and use student literacy data?	20. Please tell me about any experiences or activities within the professional learning community meetings that were most helpful to teachers in learning how to use and understand student assessment data?
	    a. Please provide examples of how the professional learning community helped teachers use and understand student assessment data?
	21. How, if at all, has the professional learning community helped teachers develop or improve the following DDDM skills:
	    [*On average, identify the level of proficiency of teachers (**1** – Needs more support; **2** – Developing; **3** – Proficient)*]
	    a. Accessing, collecting, and organizing student data *(Provide examples)*
	    b. Analyzing and interpreting student data *(Provide examples)*
	    c. Combining student information with you understanding of literacy instruction *(Provide examples)*
	    d. Knowing how to respond and modify instruction based on student data *(Provide examples)*
	    e. Evaluating the effectiveness/outcomes of instructional responses to student data *(Provide examples)*
	22. Overall, what, if any, progress or gains have you observed over time in teachers' data use knowledge or skills?
	    a. What, if any, targeted support do teachers continue to need to become proficient in using student assessment data to inform literacy instruction?

What role, if any, does a data-centered professional learning community have in supporting teachers in making instructional responses to student	23. What are examples of instructional responses teachers' made in their classrooms based on student literacy data?
	    a. Please provide examples of changes to literacy instruction?
	    b. Please explain the role, if any, the professional learning community played in improving teachers' literacy instruction?
	24. Overall, how, if at all, has the professional learning community helped teachers' improve your literacy instruction?

literacy data?	25. What evidence do you have that any instructional changes that teachers implemented due to the PLC has enhanced student learning and/or student reading proficiency? 26. How, if at all, could the professional learning community been improved?
How do teachers perceive the school's student literacy assessment system and its' correlation with student learning outcomes?	27. Based on your experience, how, if at all, do you think using student assessment data can help improve literacy instruction? 28. Do you feel confident that teachers can positively impact student learning through systematic/strategic data use? 29. How, if at all, has attending to student data from benchmark literacy assessments and progress monitoring influenced student learning? 30. What, if any, are your opinions and/or concerns about the student literacy assessment system used (TRC/DIEBELS/BURST) in the school?

How do teachers in an urban elementary school conceptualize literacy instruction?	31. Please describe the various literacy initiatives/reading programs implemented in the school.
	32. How do you conceptualize literacy instruction *(What is your philosophy on literacy instruction)?*
	    a. Ideally, what do you think literacy instruction should look like in teachers' classrooms?
	    b. Currently, what does literacy instruction look like in the classrooms you observe?
	33. How, if at all, has literacy instruction changed/shifted in teachers' classrooms since you began coaching activities and a professional learning community?
	    a. How do your views of literacy instruction differ or align with recommended literacy practices proposed by the literacy coach, Amplify project supervisor, or the school?
	    b. How do you negotiate different perspectives/recommendations for classroom literacy practices?

What factors influence the up-take of data-driven instructional decision making among literacy teachers in an urban elementary school?	34. How would you describe the school culture around using student data?
	35. Please describe how school-level and classroom-level student learning goals in literacy were developed.
	    a. Please specify how the Chancellor goals were developed.
	    b. Please specify how the Middle-of-Year and End-of-Year grade-level goals in DIBELS and TRC were created.
	36. How, if at all, has the principal supported teachers' data use?
	    a. Please explain the role/purpose of principal data meetings.
	37. How has the principal supported your efforts/plans to develop teachers' capacity to understand and

	use student assessment data?
	38. What types of professional support to do you receive from Amplify during the implementation of the grant?
	39. What were some of the barriers to teachers' effective data use?
	40. Did you experience any resistance, opposition, or skepticism from teachers when providing coaching support or facilitating the professional learning community?
	a. If yes, please explain why?
	b. How was it addressed?
	41. What, if any, are your opinions and/or concerns about the data-driven decision making processes/practices at this school?
	42. Do you think the data-driven decision making practices at this school are sustainable after the Target Literacy Grant ends and you leave?
	a. What potential impact will teacher turnover have on the school's data-driven decision making processes/practices?
	b. What is the role of the teacher leaders identified to help lead this work?
	43. In general, what is your opinion of the professional learning opportunities offered to teachers at this school that focus on data use and literacy instruction?
	44. Is there anything else you would like to add or comment about regarding student data use and improving literacy instruction in the school?

Research Questions	Interview Questions
Literacy Coach Information	1. How long have you been a literacy coach/instructional coach? 2. How long have you been a literacy coach atGallatin Elementary School? 3. Please describe your role and responsibilities as the literacy coach. a. What, if any, affiliation do you have with the Target Literacy Grant?

What, if any, coaching practices are effective in building teachers' capacity to understand and use data to inform literacy instructional practices in classrooms?	4. In your opinion, what was the *goal/purpose* of the coaching activities you provided to teachers?
	5. Please describe the type of one-on-one coaching support you provided to teachers?
	    a. *Modeled literacy instruction* to a teacher
	    b. *Observed a teacher's literacy lesson*
	    c. *Provided feedback and shared expertise* about instructional strategies or data use
	        i. What did these debriefing sessions look like?
	    d. *Demonstrated data analysis*
	    e. *Co-planned* a literacy lesson with a teacher
	    f. *Co-taught* a literacy lesson with a teacher
	    g. *Dialogue and questioning* with a teacher about their instructional practice, instructional responses, and/or understanding of student data
	6. How often did you provide one-on-one coaching activities to teachers?
	7. Describe your working relationship with the various teachers you coached in the school *(Please comment on levels of trust, respect, willingness)*?
	    a. How, if at all, did your working relationship change over time?

How, if at all, does coaching build teachers' capacity to understand and use student literacy data to drive instructional improvement?	8. What, if any, coaching activities were most helpful to teachers in learning how to use student assessment data to inform literacy instruction? a. Please provide examples of how coaching has helped teachers better understand and use student assessment data to inform literacy instruction.
How, if at all, does coaching improve	9. Overall, how, if at all, has coaching helped to improve teachers' literacy instruction? a. Please provide examples of changes to teachers' literacy instruction.

teachers' literacy instruction?	b. Please explain the role coaching played in improving teachers' literacy instruction. 10. What evidence do you have that any instructional changes that were implemented due to coaching has enhanced student learning and/or student reading proficiency? 11. How, if at all, could the coaching activities been improved?

How, if at all, does a professional learning community led by a literacy coach support teachers' data-driven literacy practices in classrooms?	12. In your opinion, what was the *goal/purpose* of the professional learning community you facilitated with Garrison literacy teachers?
	13. How did you assess teachers' learning needs pertaining to data literacy and/or literacy instructional practices?
	    a. What was the purpose of the teacher self-assessments?
	    b. How were they used to inform/plan teacher support?
	14. How often did you lead the professional learning community?
	15. What, if any, are the benefits of examining and discussing student data in a group setting with other teachers?
	16. How did you help facilitate teachers' data conversations or teacher thinking about student data in the professional learning community?
	    a. What were some of your observations about the quality of teachers' data conversations?
	    b. Based on your observations of teachers' data conversations, did teachers' demonstrate a deep understanding of how to analyze, interpret student assessment data, and make connections to appropriate instructional responses?
	17. How, if at all, has the creation and use of the *data wall* informed teachers' understanding of student literacy at the classroom-, grade-, and school-level?
	    a. Was this a beneficial learning tool?
	18. How, if at all, did the use of formative *"data trackers"* help teachers' collect and assess student literacy strengths and weaknesses within their classroom?
	    a. Were the data trackers are useful tool?
	    b. Were the data trackers readily used and referred to by teachers?
	    c. What, if any, changes would you make to teachers' formative assessment methods to ensure meaningful student data is collected and analyzed?
	16. Please describe how teachers used the *MCLASS data management platform* to access and organize student literacy data?
	    a. Was this an effective and efficient platform for organizing student assessment data?
	    b. Did teachers have sufficient training in learning how to access and use the data management

	platform?
	c. What if any changes would you make to the MCLASS platform to ensure more meaningful student literacy data is collected and represented?

What role, if any, does a data-centered professional learning community have in building teachers' capacity to understand and use student literacy data?	19. Please tell me about any experiences or activities within the professional learning community meetings that were most helpful to teachers in learning how to use and understand student assessment data?
	    a. Please provide examples of how the professional learning community helped teachers use and understand student assessment data?
	20. How, if at all, has the professional learning community helped teachers develop or improve the following DDDM skills:
	    [*On average, identify the level of proficiency of teachers (**1** – Needs more support; **2** – Developing; **3** – Proficient)*]
	    a. Accessing, collecting, and organizing student data *(Provide examples)*
	    b. Analyzing and interpreting student data *(Provide examples)*
	    c. Combining student information with you understanding of literacy instruction *(Provide examples)*
	    d. Knowing how to respond and modify instruction based on student data *(Provide examples)*
	    e. Evaluating the effectiveness/outcomes of instructional responses to student data *(Provide examples)*
	21. Overall, what, if any, progress or gains have you observed over time in teachers' data use knowledge or skills?
	    a. What, if any, targeted support do teachers continue to need to become proficient in using student assessment data to inform literacy instruction?

What role, if any, does a data-centered professional learning community have in supporting teachers in making instructional responses to student literacy data?	22. What are examples of instructional responses teachers' made in their classrooms based on student literacy data?
	    a. Please provide examples of changes to literacy instruction?
	    b. Please explain the role, if any, the professional learning community played in improving teachers' literacy instruction?
	23. Overall, how, if at all, has the professional learning community helped teachers' improve your literacy instruction?
	24. What evidence do you have that any instructional changes that teachers implemented due to the

	PLC has enhanced student learning and/or student reading proficiency? 25. How, if at all, could the professional learning community been improved?
How do teachers perceive the school's student literacy assessment system and its' correlation with student learning outcomes?	26. Based on your experience, how, if at all, do you think using student assessment data can help improve literacy instruction? 27. Do you feel confident that teachers can positively impact student learning through systematic/strategic data use? 28. How, if at all, has attending to student data from benchmark literacy assessments and progress monitoring influenced student learning? 29. What, if any, are your opinions and/or concerns about the student literacy assessment system used (TRC/DIEBELS/BURST) in the school?

How do teachers in an urban elementary school conceptualize literacy instruction?	30. Please describe the various literacy initiatives/reading programs implemented in the school.
	 31. How do you conceptualize literacy instruction *(What is your philosophy on literacy instruction)?*
	     a. Ideally, what do you think literacy instruction should look like in teachers' classrooms?
	     b. Currently, what does literacy instruction look like in the classrooms you observe?
	 32. How, if at all, has literacy instruction changed/shifted in teachers' classrooms since you began coaching activities and a professional learning community?
	     a. How do your views of literacy instruction differ or align with recommended literacy practices proposed by the external literacy consultant or the school?
	     b. How do you negotiate different perspectives/recommendations for classroom literacy practices?

What factors influence the up-take of data-driven instructional decision making among literacy teachers in an urban elementary school?	33. How would you describe the school culture around using student data?
	 34. Please describe how school-level and classroom-level student learning goals in literacy were developed.
	     a. Please specify how the Chancellor goals were developed.
	     b. Please specify how the Middle-of-Year and End-of-Year grade-level goals in DIBELS and TRC were created.
	 35. How, if at all, has the principal supported teachers' data use?
	     a. Please explain the role/purpose of principal data meetings/
	 36. How has the principal supported your efforts/plans to develop teachers' capacity to understand and use student assessment data?

	37. What were some of the barriers to teachers' effective data use?
	38. Did you experience any resistance, opposition, or skepticism from teachers when providing coaching support or facilitating the professional learning community?
	a. If yes, please explain why?
	b. How was it addressed?
	39. What, if any, are your opinions and/or concerns about the data-driven decision making processes/practices at this school?
	40. Do you think the data-driven decision making practices at this school are sustainable after the Target Literacy Grant ends and the external literacy consultant leaves?
	a. What potential impact will teacher turnover have on the school's data-driven decision making processes/practices?
	b. What is the role and capacity of the teacher leaders identified to help lead this work?
	41. In general, what is your opinion of the professional learning opportunities offered to you that focus on data use and literacy instruction?
	42. Is there anything else you would like to add or comment about regarding student data use and improving literacy instruction in the school and or in your classroom?

APPENDIX E: CLASSROOM OBSERVATION PROTOCOL

1. What is the physical setting of the classroom? What is on the walls? How are the desks arranged?

2. Who is in the class? How many students? What are their ethnicities?

3. What is going on? What is the teacher saying and doing, and what are the students doing and saying?

4. Which behaviors are repetitive? What routines are occurring? How do the students interact with the teacher and vice versa?

5. What is the content chosen by the teacher? What aspect is the teacher focusing on?

6. What is the teacher teaching? What pedagogical strategies is she using? What activities are occurring?

7. How does the teacher communicate her purpose for the lesson or activity?

8. What feedback are the students providing in the activity/discussion/instruction? How are they providing it?

9. What is not happening that could—in reference to classroom structure, pedagogy, and activity?

10. How are the students responding to the teacher and to what she is teaching?

(Adapted from LeCompte & Preissle, 1993, p. 199-200 as cited in Carlson, 2007, p. 5)

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