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Exploring Teachers' Perceptions of Assessment Literacy in a High Performing School District in New Jersey

Marlena Celebre-Baird
celebrma@shu.edu

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New Jersey

By

Marlena J. Celebre Baird

Dissertation Committee
Jill Patterson, Ed. D., Mentor
David Reid, Ph. D.
Matthew Block, Ed.D.

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APPROVAL FOR SUCCESSFUL DEFENSE

Marlena Celebre-Baird has successfully defended and made the required modifications to the text of the doctoral dissertation for the Doctor of Education during this Fall 2021.

DISSERTATION COMMITTEE

_____
Mentor, Jill Patterson, Ed.D.   Date

_____
Committee Member, David Reid, Ph.D.   Date

_____
Committee Member, Matthew Block, Ed.D.   Date

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Dedication

This is dedicated to

Ian, Mom, Dad, Isla, & Jonah

for your unwavering love and support.

Abstract

As teachers gain experience, their assessment knowledge base, personal beliefs, and the educational context come together to shape their identity as an assessor. Therefore, assessment literacy is not simply a stagnant knowledge base of skills but rather that takes shape over time, through reflective teaching continues to develop. This study sought to add to the body of research that highlights and describes, through the lens of the teacher, how beliefs and contextual factors influence a teachers' assessment literacy in practice.

A qualitative case study methodology was selected for this study to explore how elementary K–5 teachers' personal beliefs play a role in the assessment culture of classrooms within a high-performing school district. This methodology was chosen because it facilitated the exploration of teachers' assessment practices and assessor identity development through multiple data sources. Data were collected through three data sources; surveys, focus group interviews, and artifact-based self-reflection. Themes emerged that highlighted how teachers perceive their own assessment literacy as a fluid and ongoing process.

Findings suggest that the teachers in this high-performing school district believe engaging in reflective teaching practices would allow them the time to reflect on inherent biases as well as context influences and grow as assessment literate teachers. Implications from the study include that professional development, which allows teachers to spend time with data that has been collected and engage in dialogue with colleagues, would enhance teacher assessment practices by supporting assessment-based decision making and instructional choices.

Keywords: assessment literacy, assessor identity development, reflective teaching, professional development

Table of Contents

List of Tables

List of Figures

Chapter I

The current educational climate is underscored by the demand for rigorous learning expectations for our students to compete in an advancing global economy, but what exactly does that mean? With the adoption of the Common Core State Standards, claims were made by policymakers that the bar would be raised on the expectations for our students in terms of learning standards and teaching rigor. According to the New Jersey Department of Education website (2020), "Currently the standards are designed to prepare our students for college and careers by emphasizing high-level skills needed for tomorrow's world." A goal of standardized and classroom-based assessments is the measurement of cognitively rigorous learning skills. In order to help students attain these higher levels of academic success and cognitive development, it is necessary that teachers develop appropriate levels of assessment literacy.

Early definitions of *Assessment literacy,* simply stated as knowledge and skills related to assessment, do not sufficiently encapsulate the complexity of a teachers' role as assessor. In addition, standards for professional development in assessment and measures used to evaluate teacher assessment literacy do not sufficiently represent the complexities of the concept. To align with current understandings from research, the inclusion of the influence of the educational context as well as the dimensions of beliefs, emotions, and experiences of teachers that influence their conceptions when discussing Assessment Literacy must occur. As teachers gain experience, their assessment knowledge base, personal beliefs, and the educational context come together to shape their identity as an assessor. Assessment literacy is therefore not simply a stagnant knowledge base of skills but rather that takes shape over time and, through reflective teaching, continues to develop.

1

Background

As the necessary skills in the 21st-century workplace evolve and expand, the educational system in the United States continues to experience pressures to directly teach and develop these skills within students (Kyllonen, 2012). Research suggests that as technology is changing and working environments are developing, so are the required skills to successfully participate in the changing workplace. These include areas such as interpersonal skills, technology skills, communication skills, collaboration, and problem-solving skills. There have been many attempts by researchers and organizations to define, through various methodologies, including meta-analysis and literature reviews, what 21st-century skills are (Voogt & Pareja Roblin, 2010; Finegold and Notabartolo, 2008; Oswald, Schmitt, Kim, Ramsay, & Gillespie, 2004; Schmitt et al., 2007). Two organizations that have attempted to define and organize skills necessary for global competitiveness are the Partnership for 21st Century Learning (P21) and The Assessing and Teaching of 21st Century Skills (ATC21S) organization.

The Partnership for 21st Century Learning (P21) is a non-profit organization based in Washington, D.C., which unites business, government, and educational leaders from the U.S. and abroad to guide evidence-based educational policy and practice as it relates to the changing global economy (Battelle For Kids, 2019). According to the P21 website (2019), "Learning and innovation skills are what separate students who are prepared for increasingly complex life and work environments in today's world and those who are not." The Partnership for 21st Century Learning has organized the skills they deem essential for success in the evolving economy in their Framework for 21st Century Learning. Amongst the skills listed are those falling in the category of Learning and Innovation Skills—the 4 C's, which directly represent higher-order thinking skills: Creativity and Innovation, Critical Thinking and Problem Solving,

Communication, and Collaboration. The framework was created through the collaborative efforts of teachers, educational experts, and leaders in business. It represents the interests of various stakeholders who are invested in raising the bar on cognitive rigor for students across the United States and abroad.

According to Binkley, Erstad, Herman, Raizen, & Ripley (2010), another organization that has focused efforts on promoting 21st Century Learning Skills and encouraging educators to promote higher-order thinking skills is The Assessing and Teaching of 21st Century Skills (ATC21S) organization. ATC21S is sponsored by global businesses Cisco, Intel, and Microsoft, and they commissioned a white paper to define 21st-century skills which used an expert group to propose a taxonomy of their own organized as follows:

- Ways of Thinking (creativity and innovation; critical thinking, problem-solving, and decision making; learning to learn and metacognition)
- Ways of Working (communication; collaboration and teamwork)
- Tools for Working (information literacy; information technology and communication literacy)
- Living in the World (life and career; personal and social responsibility)

It is evident that raising the bar on the cognitive rigor of learning tasks for students in this country is a primary focus of policymakers, economists, and education stakeholders.

In response to the demand for students to have higher critical thinking levels, educational policy has focused on increasing the learning expectations for students. In December 2008, *Benchmarking for Success: Ensuring U.S. Students Receive a World-Class Education* was a report released by the National Governors Association, Council of Chief State School Officers, and Achieve, Inc. introducing the concept of Common Core State Standards as well as rising

expectations for our students in terms of rigor. Likewise, at the state level, New Jersey policy has also reflected enhanced expectations of critical thinking skills. According to the New Jersey Department of Education website (2017), "Currently the standards are designed to prepare our students for college and careers by emphasizing the high-level skills needed for tomorrow's world." These high-level skills comprise Standard 9 of the New Jersey Learning Standards and focus on problems solving and critical thinking skills.

The importance of standards-based assessment and accountability measures in education has been justified because it serves the purpose of informing the public about the efficacy of a publicly funded system of schools in each state. Large-scale standardized assessments have played a considerable role in measuring student achievement and teacher effectiveness, influencing educational policy as a result of the accountability pressures within our national educational system (DeLuca & Bellara, 2013). The educational accountability movement is a direct result of federal policies dating back as far as the 1960s with the Elementary and Secondary Education Act (ESEA), which focused on desegregating schools in the United States and offering all students equal access to education. Two decades later, the National Commission on Excellence Education published the 1983 report, *A Nation at Risk*, which highlighted the U.S. educational system's shortcomings when compared to international competitors as well as the severe discrepancy in student achievement between disadvantaged and underrepresented subgroups within our country's educational system (National Commission on Excellence Education, 1983).

Perhaps the most notable policy to influence the accountability context of U.S. public education is the federal No Child Left Behind Act (NCLB) of 2001 (Tienken, 2018). This policy was designed to "close the achievement gap within accountability, flexibility, and choice, so that no child is left behind" (NCLB, 2002, p. 1425). After the development of NCLB 2001 came the

4

2009 American Recovery and Reinvestment Act, which was intended to stimulate the economy and allocate funds to areas of critical concern in the nation, one of which being the public education system through more than four billion dollars in educational reform efforts such as Race to the Top (USDOE, 2009). These reform efforts incentivized states to adopt common standards, standardized assessment tools, and assessment data to improve instruction. Subsequently, the 2012 reauthorization of ESEA, *Blueprint for Reform*, reasserts federal roles and places priority on improving teacher and principal effectiveness as measured by high stakes assessment data (DeLuca and Bellara, 2013).

More recently, the Every Student Succeeds Act (ESSA, 2015) was passed, which required that each state implement a school accountability system designed to identify the lowest-performing schools to provide comprehensive support or targeted assistance. The ESSA (2015) accountability policy also required states to develop a mandatory public "report card" in order to rank or label public districts and schools within them. Most states adopted a system for grading schools in one of three similar ways: (a) A–F scale, (b) points scale, (c) stars scale. Policies such as NCLB 2001 and ESSA have contributed to an environment in the state of New Jersey and across the United States, in which assessment is a driving force behind educational decision-making. In this context, as the stakes around assessment become higher, developing and supporting teacher assessment literacy has become a more urgent priority of local and national educational policymakers and leaders (DeLuca, Lapoint-McEvan, & Luhanga, 2016).

Raising the bar on the cognitive rigor of learning tasks for students in this country is a primary focus of policymakers, economists, and education stakeholders. Thus, the implications that learning standards have at the local level on curriculum, instruction, and assessment should be considered and explored. Assessment is an ongoing part of all students' educational lives in school in the form of formative and summative assessments. Assessment is a necessary tool to

inform quality instruction and advise curriculum development, identify areas of student strengths and needs, and evaluate the effectiveness of the learning experiences students are engaging in.

Research suggests it is important to identify the importance of assessment in your practice and then to reflect on its role in providing students with opportunities to engage in cognitively demanding interactions with the curriculum. Traditional paper and pencil assessments may not be valid and reliable tools for measuring 21st-century skills. How we measure students' higher-order thinking skills in areas such as informed decision making, collaboration, and problem-solving is important when looking at assessment development to go along with revised curriculum standards. According to Kyllonen (2012), 21st Century Skill assessment measures rely mostly on rating scales (self and other), which are open to subjectivity and can often lead to feelings of confusion in public. An example taken from previous research was to imagine if students' mathematics achievement was measured in self and teacher ratings as opposed to actual mathematics achievement test scores. Rating scales are subject to personal interpretation and lack the objectivity of raw mathematical achievement scores on tests or quizzes that assess specific mathematical skills.

Despite claims that standardized tests are fully objective, standardized tests are intended to be measures of achievement and should not be misused as measures of higher-order thinking skills if they have not been validated to do so (Tienken, 2015). According to an article by researcher Christopher Tienken (2015), "If the test results have not been validated for making multiple determinations, then the decisions made about educators, students, schools, and school districts based on the results could be flawed." According to research, it appears that as standardized assessment measures are being revised, such as the Programme for International Student Achievement (PISA), changes may be seen to include collaborative problem-solving

tasks (Kyllonen, 2012). According to Kyllonen (2012), "The inclusion of a collaborative problem-solving measure in PISA 2015 may be a signal of the interest around the world in skills that go beyond those measured by traditional standardized tests in mathematics, reading, and science content areas." While larger-scale changes at the state and nationwide level of standardized assessments may take longer to include those elements that are necessary measures of higher-order thinking skills, educators at the local level can make conscious efforts to create more cognitively rigorous assessments in their classrooms.

A challenge to districts is that they must ensure their teachers have sufficient professional development in areas of assessment practice to make changes that raise the quality of assessment at the local level. Quality educators engage in regular reflective teaching practices to grow and develop in all aspects of their craft, including reflection on assessment practices. A teacher's proficiency in selection, development, execution, and interpretation of assessment is defined as *assessment literacy* (Stiggins, 1991). There has been a growing interest in the area of assessment literacy and assessment's role in student learning. Recently, the importance of assessment literacy has become increasingly accepted, and teachers' assessment practices have been the subject of more research (Black & William, 1998; Leung, 2014). In order for students to achieve high levels of academic success, teachers must develop adequate types of assessment literacy (Stiggins, 1995). Despite this apparent need for assessment literacy, many teachers are often engaging in assessment-related tasks and decision-making with insufficient training or knowledge of best assessment practices (DeLuca, 2012; Lam, 2015). This lack of effective professional development results in what Stiggins (2010, p. 233) refers to as "assessment illiteracy."

The development of assessment literacy is something that takes shape over time through reflective teaching continues to develop. Elements that hinder the development of assessment literacy include a consistently changing knowledge base, context-dependent and subject-specific implications to assessment practices, and no guarantee that measurements of a teachers' mastery of assessment-related principles will transfer into practice. Prior research in the area of assessment literacy does not account for new understandings about the importance of teachers' conceptions about assessment as well as sociocultural contexts (policy, cultural and social norms, district-level priorities) that shape a teachers' assessment literacy (Xu & Brown, 2016). Thus, this study sought to add to the body of research that will highlight and describe, through the lens of the teacher, how beliefs and contextual factors influence a teachers' assessment literacy in practice.

The district selected for this study was chosen because of its reputation and accolades as a high-performing school district. As previously stated, a growing expectation for high levels of student academic success and cognitive rigor in instruction and assessment is evident when one examines education policies at the national and local levels. Of particular interest to me as a researcher was a school district in which the demands for students have been raised and success documented through standardized test scores as well as statewide school reports and rankings. Specifically, I was interested in the individual experiences that teachers in a demanding and high-performing school district describe those experiences as it relates to assessment practice within this context. How does a district which has a rigorous academic program for its students develop and provide support for teachers' assessment literacy? Data gleaned from this study could identify the need for and guide the planning of professional development for teachers regarding assessment literacy.

Problem Statement

As federal policies have been created, states have adopted new standards and created statewide standardized assessments to measure these standards. Thus, schools at the local level then translate these standards into practice through curricula. Furthermore, teachers develop lessons and assessments on a daily basis to align with standards set forth by the state. Teachers' ability to create, implement, interpret, and interact with these assessments contribute to their need to develop a deep understanding of *assessment literacy.*

Research suggests that teacher assessment literacy has a significant impact and should be a primary area of focus for educational leaders as it has implications in how teachers use the information to make essential decisions about student learning and curriculum development (Fives and Barnes, 2020; Baird, 2010). As such, it is important that teachers be skillful in all aspects of assessment practice to best support student learning (Brookhart, 2017; William, Lee, Harrison, and Black, 2004; Bliuc, Ellis, Goodyear, and Hendres, 2011). Thus, the implications that learning standards have on the accountability of teachers to develop rigorous assessments and use the data gleaned from these assessments in decision-making need to be considered and explored. Deeper understandings of the factors that define and influence educators' assessment literacy, as well as challenges faced by districts to develop educator skill and understanding in this area, are needed to support quality assessment practices. The assessment practices of teachers directly impact student learning and the utilization of data to increase the cognitive rigor of instruction (Stiggins, 1995).

At a national level, federal policies have shaped assessment literacy by influencing assessment and accountability culture in the United States. This is evident through federal influences on types of professional development activities teachers engage in, mandating curriculum standards, developing large-scale standardized assessments, and limiting teacher

autonomy (Forsberg & Wermke, 2012; Gu, 2014). As a result, at the state and local levels, contextual factors such as sociocultural norms, district policies, and community expectations play a role in shaping a teachers' assessment literacy development. Teachers are consistently negotiating their assessment knowledge base, personal conceptions, and contextual factors as they develop their identity as an assessor (Xu & Brown, 2016).

Research has shown that while teachers may have a sufficient knowledge base about assessment skills, the reality is that contextual demands require professional decisions to be made in response to a variety of factors that influence assessment practice (Xu & Brown, 2016). Thus, to understand assessment literacy more deeply, this study aimed to gather insights into teachers' assessment decision-making in a specific context. The context selected for this qualitative case study was a high-performing school district. Inquiry into a successful school district in which teachers engage in assessment practices regularly would provide insight beneficial for professional development (Xu & Brown, 2016).

Purpose Statement

Early standards and measures used to define assessment literacy primarily addressed the knowledge and skills necessary for teachers to competently design, analyze, and interpret large-scale and classroom-based assessments and their results. These original standards and measures did not include an influential factor in the assessment culture of a classroom, which is a teachers' conceptions and beliefs about assessment. Thus, the purpose of this study was to explore how teachers in a high-performing school district described assessment literacy in practice as well as negotiated their personal beliefs about assessment within their educational context. This study sought to expand the complex and evolving definition of assessment literacy by exploring the experiences of teachers. More specifically, it aimed to illuminate deeper understandings about the assessment decision-making of teachers by better understanding the experiences of a group

of teachers in the selected district. Through descriptions shared by teachers in their own words, this study provided insight into how teachers in the specific context prioritize aspects of assessment practice. The findings of this study aimed to inform the planning of future professional development in the area of assessment.

Research Questions

1. How do elementary K–5 teachers in a high-performing school district define the necessary knowledge and skills of an assessment-literate teacher?

2. How do elementary K–5 teachers in a high-performing school district describe assessment literacy within their teaching practice?

3. How do elementary K–5 teachers in a high-performing school district describe the contextual influences that they must consider as it relates to their assessment practice?

4. How do elementary K–5 teachers in a high-performing school district negotiate their personal beliefs and conceptions about assessment within their educational context?

Assumptions, Limitations, and Delimitations

There are several limitations within this study that should be addressed from the onset. In this qualitative case study, the findings are only applicable to the particular case being studied and cannot be generalized to other contexts. Another limitation of this qualitative study included the time-consuming nature of the research due to laborious data collection procedures and coding processes. To increase the efficiency of data collection, open-ended surveys and focus group interviews produced large amounts of data in a timelier manner (Miles, Huberman, & Saldana, 2020). In addition, it is important to recognize and reflect on the researcher bias that was unavoidable in this study. The researcher conducting this study is a member of the elementary teaching staff within the district selected for the study. Measures to ensure data quality included

outlining and making the intentions clear for the participants in the study through informed consent and the triangulation of data sources (Miles, Huberman, & Saldana, 2020). Reflexivity strategies included member checking, peer review, and keeping an "audit trail" of researcher thoughts to acknowledge yet lessen researcher bias (Berger, 2015). A final limitation of this study is that, because of this being a purely qualitative study, findings are not generalizable, nor do they indicate cause or effect. The researcher made efforts to increase credibility and transferability to similar contexts as those delineated in the sampling criteria.

Significance

While previous research documents the knowledge and skills necessary for teachers to become assessment literate, there are gaps in research in the area of assessor identity construction and teacher learning in the area of assessment, focusing on teachers' conceptions. One goal of this study was to add to the body of literature that seeks to expand the complex and evolving definition of assessment literacy by exploring the experiences of teachers. The findings of this study contributed to the theorization of assessment literacy by adding to the discussion about the components that make up assessment literacy and influence the construction of an assessor identity. The researcher was interested in how components of the Teacher Assessment Literacy in Practice framework presented by Xu and Brown (2016) were described by teachers in their own words. The research illuminated how they prioritize aspects of their assessment practice by negotiating the tensions of personal beliefs, contextual influences, and a dynamic knowledge base. A significant contribution of this study was to explore how contextualized the knowledge base of assessment skills must be given varied sociocultural influences on assessment literacy. More specifically, this study provided insight into how the nuances unique to the environment of a high-performing school district facilitated or inhibited teacher assessment

literacy development. Thus, having implications for policy at the local, state, and federal level to consider in context into the accountability frameworks that are used to scrutinize both teacher and student success. This could have implications for resource allocation, such as the development of assessment standards that account for a dynamic knowledge base based on assessment research and cultural contexts that teachers find themselves assessing in. At a professional level, the findings of this study aimed to provide guidance for teachers who hope to develop assessment literacy and educational leaders who provide professional development in assessment. Prior research supports the understanding that teachers who are considered assessment literate are those who consistently reflect on practices, participate in ongoing professional development, engage in professional discourse about assessment, question their own conceptions of assessment, and seek resources to strengthen their identity as an assessor. In addition, findings highlighted evidence of how assessment training must change to directly address the influence of teacher conceptions and context on assessment literacy development.

Organization of the Study

In Chapter I, an overview of the problem as related to the need for teachers to develop strong assessment literacy as a result of the accountability culture existent in the United States is presented. Existing literature suggests that more research be conducted around assessment literacy components and influencing factors of teachers' personal beliefs as well as context-specific factors. Chapter II is composed of a literature review of previous research regarding the definition of assessment literacy, components of assessment literacy, and challenges to the development of assessment literacy. In Chapter III, the researcher will expand on the methodological approach and procedures used for this qualitative study. Data collection sources and procedures will be detailed within this chapter. Chapter IV will organize and present data

and the main findings of the study. Finally, Chapter V will summarize the qualitative findings, provide an analysis of the data, outline recommendations for future implications, and present a conclusion.

Chapter II

Literature Review

This chapter will, first, describe the study's theoretical framework of reflective teaching. It will continue with a review of the literature with an emphasis on defining assessment literacy, an in-depth look at the components of assessment literacy, teacher conception of assessment, and challenges to the development of assessment literacy. It will conclude by summarizing common understandings gleaned from the literature, identifying perceived gaps in the literature, and explaining how this study will build upon and expand existing scholarship and the broad discourse surrounding teachers' assessment literacy.

Theoretical Framework

When studying aspects of teacher practice, such as assessment literacy, which requires the honing and development of skills, the researcher must consider research-based strategies for teacher learning. Specifically, two leading ways for teacher learning to occur are engaging in reflective teaching practices and participating in professional activities (Schön, 1983; Westheimer, 2008). Research suggests that the ability to monitor one's thinking and use appropriate skills to achieve the desired outcome is defined as *metacognition* (Brown, 1987). Metacognitive processes underlie aspects of teaching such as goal setting, selecting needed cognitive strategies, planning, decision-making, evaluating outcomes, and reflection of processes. Griffith et al. (2016) found that teachers can refine their expertise within aspects of their practice by evaluating pedagogical knowledge, content knowledge, and the complexities of the classroom through reflective practice. Thus, teachers' assessment literacy can grow and develop over time with the focused and intentional use of the reflective practice.

Reflective Teaching Practice was selected as the theoretical framework for this study over other teacher learning frameworks as it was most appropriate and encompassing for the research. Other research-based teacher learning, such as professional learning groups, online learning, and professional reading, were considered but not selected since reflective teaching practice allows for more flexibility in how teachers engage in teacher learning. In addition, in the Reflective Teaching Model presented by Reynolds and Suter (2012), the reflection and revision phase encompass all the previously mentioned teacher learning models. Thus, this was the most appropriate theoretical framework as it would allow participants to describe a variety of teacher learning opportunities they experience or value within their context. The qualitative nature of the study encouraged participants to reflect on their own practices and need for professional development. Reflective teaching would be an appropriate framework to encourage participants to use as they describe their assessment practices and professional learning.

According to research, reflective teaching occurs for the three following reasons: to improve and develop teaching and learning, to cope with changes within the profession, and to comply with regulations. Rushton and Suter (2012) wrote, We are all on a trajectory of self-improvement and the process of being challenged by changing job roles and shifting institutional structures can be taken as a set of ideas that are both liberating and emancipatory as you take your opportunities to make your voice heard" (p. 8). Reflective teaching is a practice in which teachers hone and perfect their craft through self-evaluation and intentional decision-making to adapt or change their practice. A basic model for reflection includes the steps of practice, reflection, revised practice, and further reflection, as shown in Figure 1.

Figure 1

Model of Reflective Teaching Practice
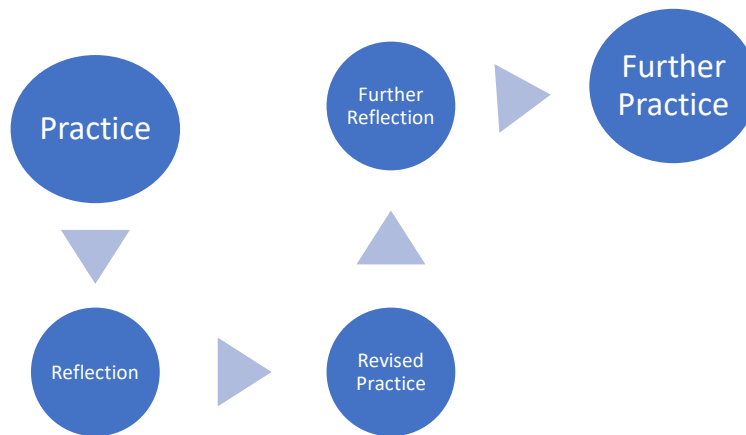
Note. Based on A Basic Model of Reflection (Reynolds & Suter, 2010)

Based on the model shown of reflective teaching practice, a teacher will engage in a particular aspect of teaching practice, for example, student assessment, and subsequent reflection. This reflection can take the form of self-questioning, peer mentoring, and ultimately problem identification and decision making on changes to implement.

Reflection can best be described in one of three categories; technical, organizational, and critical (Rushton & Suter, 2012). Technical reflection is concerned with the day-to-day nuances of teaching and learning, such as planning, assessing, strategies, and resources. Organizational reflection is focused on the management and use of learning resources, activities, and supports. Critical reflection scrutinizes the outside influences on teaching, such as social, political, and economic contexts that teachers find themselves facing. After the initial reflection, the teacher implements intentional changes to their practice to ensure that they are, in fact, attempting to improve teaching and learning. Further reflection is focused more on the evaluation of the intentional changes made to teaching practice to determine if they did, in fact, work or not. If not, then why and what can be done in further practice to effectively improve teaching practice.

While reflective practice is not a novel concept, research has consistently proven that this practice has the power to aid teachers in understanding the links between what they do and how they can improve effectiveness (DeLuca, 2012). Thus, reflective practice in assessment is essential for the development of assessment literacy.

Research suggests that teachers' classroom assessment practices have a significant impact on student learning through teachers' instructional decision making as well as students' self-monitoring (Klinger, Volante, & DeLuca, 2012; Black & William, 1998, 2003; Hume & Coll, 2009). Yet, despite this widely accepted notion, teachers are rarely provided ample time and opportunities to deeply reflect on their own assessment practice and discuss experiences with colleagues (Klinger, Volante, & DeLuca, 2012). Thus, a growing need is present to develop teacher assessment literacy skills through meaningful and reflective professional development opportunities. In addition, there is a lack of research around effective professional development activities that guide teacher reflection and learning in the area of assessment (Stiggins, 2002; DeLuca et al., 2010). Through reflective practice as a guiding framework, this study detailed the assessment experiences of teachers to support the ongoing improvement of assessment education and assessment literacy development.

Review of the Literature

This section provides a review of literature related to the definition of assessment literacy, components of assessment literacy, teacher conceptions of assessment, and challenges to the development of assessment literacy. It aims to provide deeper insight into prior research that has shaped teacher assessment learning and defined policy standards for teacher assessment practice.

Definition of Assessment Literacy

According to the American Federation of Teachers (AFT), National Council on Measurement in Education (NCME), and National Education Association (NEA) (1990), assessment is defined as "the process of obtaining information that is used to make educational decisions about students, to give feedback to students about their progress, strengths, and weaknesses, to judge instructional effectiveness and curricular adequacy, and to inform policy." This definition suggests that assessment is not simple but rather a complex process. In the United States, teachers spend as much as 50% of their teaching responsibilities on assessment-related tasks and rely on classroom assessment data more heavily than standardized assessment (Fives and Barnes, 2020; Baird, 2010). Research has shown that classroom assessment practices have a significant influence on student learning, achievement, and identity (Brookhart, 2017; William, Lee, Harrison, and Black, 2004; Bliuc, Ellis, Goodyear, and Hendres, 2011). Provided the fact that classroom assessment has such significance in the educational life of a student, it is important for teachers to engage in effective assessment practices. Teachers require a strong knowledge base of fundamental practices in classroom assessment which, in part, defines *assessment literacy*. How a teacher prioritizes their knowledge of assessment is known as their *approach to assessment* (DeLuca, LaPointe, McEwan, and Luhanga, 2016).

Assessment literacy is a concept that was introduced in the United States by Stiggins (1991) and typically has a broad definition, including both assessment knowledge as well as skills related to teacher practice. Early definitions of assessment literacy focus on the necessary knowledge and skills teachers must possess to measure student learning (Pastore & Andrade, 2019; Stiggins, 1991a; 1991b). A seminal set of standards used to define assessment literacy emerged in 1990, known as the *Standards for Teacher Competence in the Educational*

Assessment of Students (AFT et al., 1990). These standards were referenced in policy and teacher preparation programs for nearly two decades (DeLuca, LaPointe-McEwan, Luhanga, 2016). The document was created with the goal of guiding teacher educators and teachers in developing assessment literacy through a set of seven standards. These standards include (a) choosing assessment methods appropriate to instructional decisions; (b) developing assessment methods appropriate for instructional decisions; (c) administering, scoring, and interpreting the results of both externally and teacher-produced assessment methods; (d) using assessment results when making decisions about individual students, planning to teach, developing curriculum, and school improvement; (e) developing valid pupil grading procedures; and (f) recognizing unethical, illegal, and inappropriate assessment methods and uses of assessment information (AFT et al., 1990).

The 1990 *Standards* served as a blueprint for the development of instruments that were used to investigate and evaluate teacher assessment literacy levels, such as the *Teacher Assessment Literacy Questionnaire (TALQ)* and *Classroom Assessment Literacy Inventory (CALI)* (Plake et al., 1993; Mertler, 2004). Scholars have written about assessment literacy as a construct in which there is a continuum of expertise or levels used to differentiate between novice and expert teachers (Plake, 1993). The growing interest in this subject, influenced greatly by the accountability culture surrounding education, has widely expanded efforts to support preservice, novice, and expert teachers in developing their assessment literacy. Research has shown that significant gains in student achievement, metacognitive functions, and motivation for learning have been noted when teachers integrate assessment with their instruction (Gardner 2006; Willis 2010).

20

Recent studies have expanded on the definition of assessment literacy by taking into account the need to update the knowledge base to reflect current developments in assessment policy and practice, such as the use of formative assessment and accountability contexts (Brookhart, 2011; Stiggins 2010). In 2011, Brookhart proposed to update the widely accepted *Standards for Teacher Competence in the Educational Assessment of Students* (AFT et al., 1990) and redefine assessment literacy to include various perspectives on large-scale educational and smaller scale school-based assessment. Through this redefinition process emerged a new set of educational assessment knowledge and skills necessary for teachers (Pastore & Andrade, 2019). According to Brookhart (2011), teachers should be skilled in the following eleven competencies:

1. Teachers should understand learning in the content area they teach;

2. Teachers should be able to articulate clear learning intentions that are congruent with both the content and depth of thinking implied by standards and curriculum goals, in such a way that they are attainable and assessable;

3. Teachers should have a repertoire of strategies for communicating to students what achievement of a learning intention looks like;

4. Teachers should understand the purposes and uses of the range of available assessment options and be skilled in using them;

5. Teachers should have the skills to analyze classroom questions, test items, and performance assessment tasks to ascertain the specific knowledge and thinking skills required for students to do them;

6. Teachers should have the skills to provide effective, useful feedback on student work;

7. Teachers should be able to construct scoring schemes that quantify student performance on classroom assessments into useful information for decisions about students, classrooms, schools, and districts. These decisions should lead to improved student learning, growth, or development;

8. Teachers should be able to administer external assessments and interpret their results for decisions about students, classrooms, schools, and districts;

9. Teachers should be able to articulate their interpretations of assessment results and their reasoning about the educational decisions based on assessment results to the educational populations they serve (student and his/her family, class, school, community);

10. Teachers should be able to help students use assessment information to make sound educational decisions;

11. Teachers should understand and carry out their legal and ethical responsibilities in assessment as they conduct their work

A clear shift is reflected in the eleven capabilities and mirrored in recent teacher standards, which present a complex and multidimensional definition for assessment literacy, including the role of the student in the assessment practice.

International standards and measures of teacher assessment literacy reveal a deeper focus on the assessment being used for learning, fairness, teacher support, and communication of results (DeLuca, Lapoint-McEvan, & Luhanga, 2016). More specifically, in the U.S., updates to the *InTASC Model Core Teaching Standards and Learning Progressions for Teachers 1.0* (CCSSO, 2017) recognize assessment literacy and teachers "need to have greater knowledge and skills around how to develop a range of assessments as appropriate and how to use assessment

data to understand each learner's progress, plan and adjust instruction as needed, provide

feedback to learners, and document learner progress against standards (p.4)."

DeLuca, LaPointe-McEwan, and Luhanga (2016) completed an international review of

assessment literacy standards and measures in an effort to analyze conceptions of assessment

literacy as well as understand shifts in the assessment landscape across time and regions. These

researchers believed that assessment literacy is a focal point of professional requirements in

education across the world. As such, measuring and supporting teachers' assessment literacy has

been a core focus of educational systems over the past two decades.

In order to analyze the wide range of assessment literacy standards that are published in

various regions, the authors focused on assessment literacy standards from five English-speaking

countries (i.e., Australia, Canada, New Zealand, U.K., and the USA) as well as mainland Europe.

In addition, they chose to study prominent assessment literacy measures developed after 1990.

The method for the study was a thematic analysis of 15 assessment standards and an examination

of eight assessment literacy measures. Results indicated that there were noticeable shifts in

assessment literacy standards over time, yet the majority of measures are based on early

conceptions of assessment literacy and need revamping. Findings also indicated that assessment

literacy is a complex and multidimensional concept influenced by the educational context

educators find themselves in.

Further expansion of the definition of teacher assessment literacy is stated in the *National*

Board for Professional Teaching Standards (NBPTS, 2012):

accomplished teachers evaluate students to determine what they have learned from

instruction. . . . They also help students engage in self-assessment, instilling them with a

sense of responsibility for their own learning. . . .Accomplished teachers provide

students, families, caregivers—and themselves—with constructive feedback. (p. 28)

This definition illustrates the added understanding that students are an integral part of the

assessment process.

As illustrated in the evolving definitions of assessment literacy, this is a complex set of

processes that involves the integration of assessment practice with theory and philosophy. While

teacher preparation programs are required to directly instruct preservice teachers in this area,

research supports that experienced teacher are more competent and confident in their assessment

literacy than novice teachers (DeLuca and Bellara, 2013). Standards and guidelines for

assessment literacy are helpful in defining the concept; however, they do not inherently develop

teacher assessment literacy by merely existing. As the knowledge base around assessment

practices evolves, changes need to be considered, as well as the changing contextual landscape of

assessment. Research on assessment literacy must shift its focus away from the skills necessary

for assessment practice towards assessment education and the influencing factors (Xu & Brown,

2016). In light of this past scholarship, this study adds to the body of literature that seeks to

expand the complex and evolving definition of assessment literacy by exploring the experiences

of teachers with respect to their decision-making around assessment practices. In this study, and

using reflective teaching practices, teachers engaged in discourse about their assessment process,

highlighting their priorities and reflecting on personal beliefs about assessment.

Components of Assessment Literacy

Xu and Brown (2016) present the argument that assessment literacy is "dependent on a

combination of cognitive traits, affective and belief systems, and sociocultural and institutional

influences" and that this complexity necessitates a reconceptualization of assessment literacy

based on current research and new perspectives for teacher education. They discuss the reconceptualization by presenting a framework of Teacher Assessment Literacy in Practice (TALiP). A visual representation of the model is presented here in Figure 2.

Figure 2

Teacher Assessment Literacy in Practice

Assessor
Identity

Teacher
Learning

Teacher Assessment
Literacy In Practice

Micro and Macro Contexts

Teacher Conceptions of Assessment

Interpretive and Guiding Framework

Knowledge Base
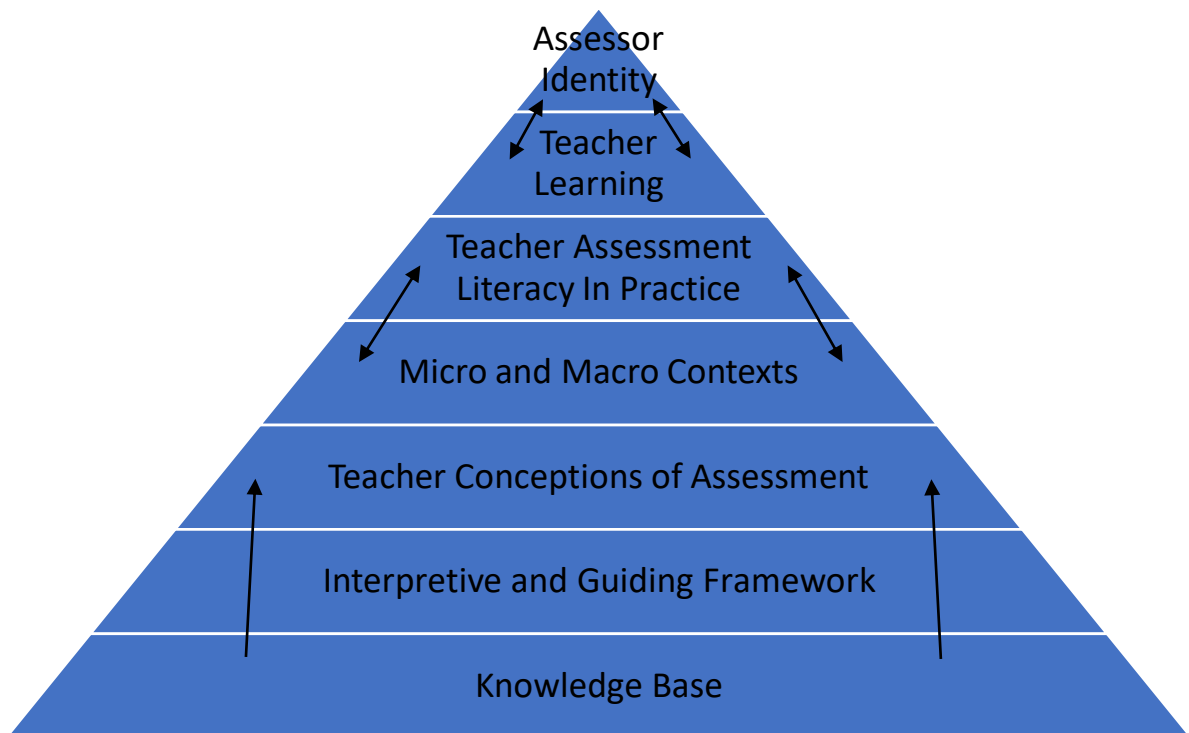
Note. Based on Xu and Brown (2016) *Conceptual Framework of Assessment Literacy in Practice*

This framework places the teacher regarding themselves in the role of an assessor as the ultimate goal and that this identity is shaped by influencing factors.

Notably, at the bottom of the pyramid is the knowledge base, which is the foundation for all components within the framework. The knowledge base, which includes a thorough understanding of the components that define assessment literacy, is necessary for the

development of standards by which assessment practices can be evaluated. Based on prior research and standards, an appropriate assessment knowledge base includes (a) disciplinary knowledge and pedagogical content knowledge; (b) knowledge of assessment purposes, content, and methods; (c) knowledge of grading; (d) knowledge of feedback; (e) knowledge of assessment interpretation and communication; knowledge of student involvement in assessment; and (g) knowledge of assessment ethics. While the knowledge base is necessary, it is not sufficient on its own for the development of assessment literacy. This framework takes into account the complex nature of assessment literacy as an evolving concept since each component itself is also fluid and changes over time. In this model, the educator, as well as their educational context and evolving knowledge base, come together to construct an assessor identity. As indicated by the multi-directional arrows, the components within this framework are interrelated and influence each other in differing ways. Xu and Brown (2016) suggest that various components within this framework can be used as an entry point into further research around assessment literacy. Questions remain about how the components that make up assessment literacy influence the construction of an assessor identity. Thus, this study was interested in how components on the framework were described by teachers in their own words, as well as how they prioritize aspects of their assessment practice.

Teacher conception of assessment

Assessment literacy encompasses the knowledge and skills necessary for teachers to competently design, analyze, and interpret large-scale and classroom-based assessments and their results. However, another key influential factor in the assessment culture of a classroom is a teachers' conceptions and beliefs about assessment. Brown (2008) has been an influential scholar in the call for research on assessment literacy to take into consideration the role of teacher

beliefs. His research draws upon the earlier work of Thompson (1992), whose seminal pieces

focused on how teachers' beliefs about mathematics significantly impacted their teaching

practice. She included in her work a definition of teacher conceptions as a mental structure

including "beliefs, meanings, concepts, propositions, rules, mental images, preferences, and the

like" (1992, p. 130).

Conceptualizations serve as the framework through which teachers view, interpret, and

interact with aspects of their teaching practice and environment, including assessment. At times,

these concepts or beliefs may be conflicting for teachers. Teachers may believe in the value of

assessment on improving learning but also feel that assessment was a necessary and sometimes

irrelevant task (Brown, 2011). To expand on this growing body of literature, Smith, Hill, Cowie,

and Gilmore (2014) focused specifically on the beliefs of preservice teachers towards

assessment, suggesting that they bring with them preconceptions based on their own personal

experiences with assessment. Preservice teachers' experiences with formal summative

assessment dominated their beliefs and thinking more than what they had been taught about

assessment theory or policy.

A reframing of the role of the teacher as assessor to include teacher conceptualizations as

an integral part of teacher assessor identity is necessary (Looney, Cumming, Van Der Kleij, and

Harris, 2018). Conceptualizations frame how teachers view and interact with the educational

environment they find themselves in. Teachers' beliefs, whether they are rational or irrational,

lay the foundation for how they approach teaching and assessment decisions. Looney et al.

(2018) state that assessment 'occurs in a social context, influenced by national and state policies,

expected learning (curriculum), pedagogical directions, and community expectations. Teacher

assessment knowledge is, therefore, a complex structure rather than a simple set of delineated

skills that can be implemented in any context' (p. 445). In order to develop teacher assessment literacy, the process of reflecting on one's beliefs and possibly negotiating or changing one's existing conceptions of assessment must occur. Prior research has acknowledged the role that teacher conceptions about assessment plays in shaping assessment literacy, but few studies include it as a legitimate and necessary dimension. This study sought to expand on this research and illuminate the critical role in the assessment identity formation process that reflective teaching on personal beliefs and conceptions plays.

Challenges to developing assessment literacy

The development of assessment literacy is dependent on multiple facets, including a combination of a dynamic knowledge base, affective and belief systems, and sociocultural and institutional influences. Four key challenges to the development of assessment literacy were evident in the literature, which will be described in further detail in this section.

The first challenge to the development of assessment literacy is the lack of reliable research available that analyzes teachers' current assessment practices, which can be used to aid in the creation of professional development focused on teachers' assessment literacy (Mertler, 2009). One principal reason for the absence of available research on teachers' assessment literacy is the weak psychometric evidence available to support assessment literacy measures (Gotch & French 2014). Gotch and French completed a systematic review of the psychometric properties of 36 assessment literacy measures. This study concluded that in spite of assessment literacy being a national priority in the United States and a bedrock component of teacher evaluation, existing measures demonstrate weak evidence across reliability and validity indicators of test content, internal consistency reliability, score stability, and association with student outcomes. Findings suggested that the validity of assessment literacy measures can be

increased if researchers examine the "representativeness and relevance of content in light of transformations in the assessment landscape (e.g., accountability systems, conceptions of formative assessment)" (Gotch & French, 2014, p. 17).

A second key challenge is that the foundational knowledge base that teacher assessment literacy learning is based on is not static. Prior research suggests that many instruments used to evaluate assessment literacy have been developed using the outdated 1990 *Standards for Teacher Competence in the Educational Assessment of Students* (AFT et al. 1990) as a guiding framework (DeLuca, LaPointe-McEwan, and Luhanga, 2016). The continued use of the 1990 *Standards* as a guiding framework is concerning as they do not align with more recent themes found in standards such as the use of formative assessment practices and standards-based education (Brookhart, 2011). Assessment literacy education needs to consider that the foundational knowledge base that preservice and in-service teachers need is always evolving based on research and policy and requires consistent and ongoing professional development (Fan et al., 2011; Popham, 2009).

A third challenge to the development of assessment literacy is the need for assessment literacy training to be individualized and reflective of the requirements of various educational contexts as different priorities at different times and places will be inherent (Vogt and Tsaigari, 2014). The context in which teacher assessment practice takes place sets boundaries around what assessment tasks look like in reality. Prior research suggests that sufficient assessment literacy skill knowledge on its own is not enough as the reality is that teachers must make professional decisions in response to external factors all the time (McMillan, 2003). These boundaries may be set by the immediate workplace, such as policies and norms within the school district or larger to the statewide and federal standards and accountability culture that exists (Gu, 2014). Teachers'

assessment practices often need to be negotiated when their knowledge of assessment conflicts with context expectations (Xu & Brown, 2016; Fleer, 2015).

A fourth key challenge is there is a present need for a deeper understanding of how teachers' prior experiences, conceptions, emotions, and needs about assessment influence their practice (DeLuca and Bellara, 2013). The process that teachers engage in to develop assessment literacy is transformative and self-reflective. In order for this to occur, teachers must be willing to acknowledge their own conceptions and practices of assessment as well as the realities of the context they find themselves in (Xu & Brown, 2016). Teachers' assessor identity and critical examination of their own assessment practice through reflective teaching practices are necessary to grow and develop their assessment literacy. This can be supported through the use of learning communities where a common language is shared and teachers share, negotiate, and make inquiries into their own practice reflectively (Lukin et al., 2004; Wyatt-Smith et al., 2010). In light of this past scholarship, this study adds to the body of literature that seeks to provide guidance for professional development in the area of assessment literacy. More specifically, this study highlights the experiences of in-service teachers and the influencing factors that are negotiated, such as beliefs and context, within their daily assessment practice.

Summary

Prior literature provides valuable information about the knowledge and skills necessary for the development of assessment literacy. However, more information is needed about the role of teacher conceptions of assessment and its influence on the development of teacher assessment literacy in practice. Research is also needed to expand the body of literature that provides a contextual understanding of assessment literacy development as teachers negotiate their beliefs, grow their knowledge base of assessment, and are influenced by external factors. To those

points, my study aimed to contribute to these gaps in the literature by describing the experiences of teachers in a high-performing school district as it relates to their assessment practices and assessment decision-making through the lens of reflective teaching practice. Chapter III will discuss the methods chosen to collect, analyze, and interpret data to achieve that goal.

Chapter III

Methodology

Early standards and measures used to define assessment literacy encompass the knowledge and skills necessary for teachers to competently design, analyze, and interpret large-scale and classroom-based assessments and their results (Stiggins, 1991). However, these standards and measures do not include an influential factor in the assessment culture of a classroom, which is a teachers' conceptions and beliefs about assessment. This factor is key to the theory of reflective teaching, which suggests that Dewey's idea of being open-minded about the beliefs one inherently holds, and their impact on practice, is essential for growth (Liston & Zeichner, 2013). The purpose of this study is to explore how teachers in a high-performing school district describe assessment literacy in practice as well as negotiate their personal beliefs about assessment within their educational context. This provides insight into reflective teaching practice by exploring the way in which teachers describe their own assessment practices and beliefs, which may influence their assessment literacy. The study asks the following:

1. How do elementary K–5 teachers in a high-performing school district define the necessary knowledge and skills of an assessment-literate teacher?

2. How do elementary K–5 teachers in a high-performing school district describe assessment literacy within their teaching practice?

3. How do teachers in a high-performing school district describe the contextual influences that they must consider as it relates to their assessment practice?

4. How do elementary K–5 teachers in a high-performing school district negotiate their personal beliefs and conceptions about assessment within their educational context?

These research questions illuminated the experiences of teachers within the context of a specific school district through their own words.

Methodology

Through qualitative research, this study utilized case study methods to explore a social phenomenon. A qualitative methodology was best suited to explore how elementary K–5 teachers' personal beliefs play a role in the assessment culture of classrooms within a high-performing school district. This methodology was chosen because it facilitated the exploration of a phenomenon within a specific context using multiple data sources (Baxter & Jack, 2008). Sofaer (1999) describes qualitative research as having "an important part in clarifying the values, language, and meanings attributed to people who play different roles in organizations and communities."

In this study, the paradigm of relativism was assumed, which states that external reality cannot exist independent of individual beliefs and conceptions (Ritchie, Lewis, Nicholls, & Ormston, 2013). Thus, this methodology aimed to provide an in-depth understanding, as interpreted by the researcher, of the educational context of teachers and the sense they make about assessment practices based on the nuances of their experiences, perspectives, and histories. Phenomenological research is concerned with the lived experiences of the participants within the study with the issue being explored, in this case, assessment literacy of teachers (Groenewald, 2004). A qualitative study was chosen for this research in order to include a variety of non-standardized data sources that could be adapted throughout the research process to gain insight about participants as issues emerged (Miles, Huberman & Saldana, 2020). This study was concerned with the beliefs and experiences of teachers, who are the ones making decisions

regarding day-to-day in-class assessment practices, and therefore a study in which the researcher interacts with the participants themselves was best suited (Groenewald, 2004).

Qualitative researchers place significance on the human interpretation of the social world and value both the participants' and the researchers' interpretation and understanding when gaining knowledge from the data (Miles, Huberman, & Saldana, 2020). Constructivists believe that an individual's truth is relative and dependent on their perspective (Baxter & Jack, 2008). Qualitative research methods, specifically case study design, encourage close collaboration between the researcher and the participants. This allows the participants to describe their views of reality to the researcher through stories and personal narratives of their lived experiences and allows the researcher to gain insight into the decision-making of participants (Miles, Huberman, & Saldana, 2020).

Research Design

A qualitative case study best suited this research design as it focused on how teachers describe assessment practices within their educational context. The researcher was interested in capturing data that shared the perceptions of participants through an inductive data collection process that allowed themes to emerge (Miles, Huberman, & Saldana, 2020). A case study should be selected as the research design when the behavior of individuals being studied cannot be manipulated and when the researcher is interested in the contextual conditions, as they are relevant to the phenomenon being studied (Yin, 2009; Holloway &Wheeler, 2010). The case study design allowed the researcher to deeply explore multiple perspectives within the same context using multiple data sources as well as accounts of diverse participants (Yin, 2009). To effectively answer the research questions specific to this study, it was essential to include more than one perspective and for the understandings gained from the data to be comprehensive and

contextualized. Yin (1999) suggests that case study research involves the triangulation of data from multiple sources, including surveys, key informant interviews, structured observations, and the collection and content analysis of relevant documents. Case study research takes into account the fact that both the "case" being studied as well as the context are fluid and may be changing over time (Yin, 1999). Research has shown that the educational context in which assessment practices take place has an influence on teachers' decision-making (Xu & Brown, 2016). As such, the third research question sought to explore "contextual influences" that were specific to the district selected as the case for this study. These contextual influences may include, but are not limited to, policy, administration, or community factors (Xu & Brown, 2016; Fleer, 2015; McMillan, 2003).

Participants

Purposive single-case sampling was used for this study which allowed for participants to be selected based on specific criteria (Mason, 2002; Patton, 2002). This sampling strategy has two functions that make it best suited for case study research (Yin, 1999). The first was to ensure that all the main constituencies of importance to the subject matter being studied were covered. The second goal of purposive sampling was that within each of the criteria used for selection that enough diversity was represented (Miles, Huberman, & Saldana, 2020). Purposive sampling strategies enhanced the confidence of the findings of the study by looking at a range of similar and contrasting cases across participants. Qualitative research studies look for patterns among participants that, due to the sampling criteria, are similar lived experiences.

The participants in this study included K – 5 elementary school teachers that represented six elementary schools within a high-performing school district. High performance was defined using the New Jersey Department of Education School Performance Report data compared to

other districts. According to 2018–2019 report data, the district selected had 85.7% of students meet or exceed expectations on ELA statewide assessments, and 73.4% of students meet or exceed expectations on statewide mathematics assessments. In addition, the district has a 4-year graduation rate of 97.4%, and 94.3% of students are enrolled in college after graduation (New Jersey Department of Education, 2020). Overall criteria for sample consideration included (a) willingness to participate in the study; (b) availability of teachers within the selected New Jersey school district teaching grades K through 5; (c) teachers who had at least one year of teaching experience in the specific district being studied to be able to examine situational experiences with assessment practices. Teachers considered for this study represented diverse profiles and levels of experience within the educational context being studied.

Data sources

This research design utilized three different data sources to gather responses from participants, including open-ended surveys, focus group interviews, and artifact-based reflection. This section describes each of the data sources in further detail.

Open-ended Surveys

Responses to an open-ended survey developed by the researcher were used as a data source in this study. The purpose of a survey was to gather a substantial amount of data across a wide net of elementary school teachers in a single district in a quick time frame. More specifically, a survey was administered on the Internet, which allowed the researcher to gather a large amount of data in a rapid timeframe (Weigold, Weigold, & Russell, 2013). Internet surveys provide many benefits for data collection, including the ability to gather larger and more diverse samples, low costs associated with data collection, and increased participant comfort due to convenience and user-friendliness (Cantrell & Lupinacci, 2007; Gosling, Vazire, Srivastava, &

John, 2004; Naus, Philipp, & Samsi, 2009). Potential limitations of conducting an Internet-based survey include limiting the participants to those who have Internet access and lack of control in regards to aspects of how and when someone participates (e.g., setting, presence of other people, length of time to complete the study) as well as other issues related to not having contact with a researcher (Nosek, Banaji, & Greenwald, 2002). To address some of these limitations, the survey was sent to teachers' staff email addresses, so they were able to complete them during the school day when it was ensured they had Internet access and a device to utilize.

The open-ended nature of the survey design provided qualitative responses that could be coded without the use of transcription. Inductive coding methods were used to identify themes as they emerged that could then be utilized and expanded on in subsequent data collection. Kvale and Brinkmann (2015) suggested that during open-ended interviews, participants describing their own experiences may discover new relationships or patterns through the process. This can be true of survey design as well while participants are recording their responses to open-ended questions. According to Miles, Huberman, and Saldana (2020), it is important to consider how much or how little prior instrumentation will be used during qualitative research data collection. As the goal of the surveys was to gather rich descriptions of the context through an exploratory and inductive method in a single school district, a survey with less prior structuring was best suited. Standardized surveys and interview questionnaires often blind the researcher to the context of the site and narrow the focus so much so that important phenomena or underlying concepts could be missed if they are not collected through the instrumentation. Rather for this study, a few open-ended questions encouraging the participants to describe their experiences were utilized. Examples of such questions included;

1. How do you define the term '*assessment literacy*' as it relates to teachers?

2. Describe your process for assessing students within your class.

3. What factors are important when creating and interpreting assessments of your students?

4. Describe your experiences with assessment as a student.

These questions allowed for participants to share their experiences in their own words, and responses were coded.

Focus Group Interviews

Similar to surveys, focus group interviews were utilized as a way for participants to describe, in their own words, their experiences with assessment and elements of assessment literacy within the context being studied. Due to the COVID-19 protocols within the school district restricting in-person meetings, the focus groups were conducted using web-based software. This allowed participants to still interact with other participants in a focus-group style method. Throughout the interview process, the researcher posed open-ended questions that narrowed and became more specific, either by rewording or asking "probes" (Sofaer, 1999).

Focus group interviews took place after open-ended surveys and data from both sources were reviewed and coded. The purpose of the focus group interview was to select 5–8 participants from the sample that completed surveys to gain deeper insight into their experiences. This number of participants was selected as it was thought to be optimal based on research by Boyd (2001), which suggests that two to ten participants is a sufficient amount to meet saturation, and Creswell (1998, pp. 65 & 113) recommend "long interviews with up to 10 people" for a phenomenological study. Focus group interviews consisted of a few unstructured and open-ended questions to elicit participant responses that reflected their views and opinions as well as elaboration on survey responses (Creswell & Creswell, 2018). The interview protocol

contained between five to seven open-ended questions developed to support the exploratory nature of the study and allow for probing questions to be asked for elaboration and clarity of participant responses (Krueger & Casey, 2015). This data source is appropriate for qualitative research because of the efficiency of gathering a considerable amount of concentrated data around the topic of interest (Morgan, 1997).

In addition, there are aspects of assessment literacy, such as beliefs, prioritizing, and decision making that are not easily observable yet through an interview were described by the participants. Interviews allowed the researcher to gain insight into a teachers' thought process, opinions, feelings, and experiences involving assessment practices through their own lens. The questioning route designed for this study focused on allowing teachers to share their experiences and describe, in their own way, assessment practices to better understand assessment literacy as a reflective teaching practice to answer the research questions. Interview questions were created keeping the following guidelines in mind: that they encouraged discussion, were clear, short, open-ended, and easy to say (Morgan, 1997). The questioning route based on the work by Morgan (1997) for this study looked similar to this:

1. Opening: Tell us your name, position in the district, and how long you have been working in X school district?

2. Introduction: Describe the X school district's perspective on the role of assessment in elementary school?

3. Transition: Think back to when you were a student. Describe your experiences with assessment.

4. Key Questions: Describe the process you engage in when developing and carrying out an assessment with your students. What aspects of assessment are the most challenging or

frustrating? What role do you feel assessment plays in your students' academic

experience?

5. Ending Questions: If you could give advice to a first-year teacher about assessment, what

would you share with them? How can X school district help support you in your

professional development and growth as an evaluator?

Data collection procedures for the focus group interviews included audio-recording of the

interview, which was used for transcription as well as notetaking. Note-taking and transcription

were completed by the researcher. A simple notetaking form was utilized based on Miles &

Huberman (1994) to include a record of main themes and impressions, explanations or

assertions, alternative explanations or disagreements, and next steps for data collection. The

purpose of the notes was to keep track of "fleeting and emergent reflections and commentary on

issues that emerge during fieldwork" that the researcher may want to follow up on in subsequent

follow-up interviews (Miles, Huberman, & Saldana, 2020, p. 86).

Artifacts and Reflections

Artifact-based reflection was utilized as a third data source. The researcher had teachers

from the focus group interview select a sample assessment used during the current school year

and describe the decision-making process they engaged in while developing or selecting this

assessment tool within the context of their classroom. This was conducted through an open-

ended questionnaire and follow-up interview, if necessary, for clarifications. This was an

appropriate method because it allowed participants time to consider and thoughtfully select

artifacts and describe using their own words (Creswell & Creswell, 2018). The research

questions for this particular study were concerned with the underlying beliefs and conceptions of

teachers as related to assessment as well as their cognitive process while selecting, designing,

administering, and evaluating assessments. Floden and Klinzing (1990) suggest that understanding a teachers' professional cognitive process is important for getting a complete understanding of their actions and decisions. A "Think Aloud" strategy for data collection can be related back to Vygotsky's (1943,1962) concept of "inner speech" as a way to study one's thoughts. More recent research supports the use of "Think Alouds" as a way for participants to reflect on their own thinking (Baars & Franklin, 2003; Winsler, Fernyhough, & Montero, 2009).

Data Analysis

The data collection and analysis process occurred simultaneously through this research study. As survey data was being collected and then analyzed, the selection and recruitment of focus group interview participants were occurring as well. As interviews were conducted and artifact-based reflections were collected, data analysis occurred through an inductive coding process and allowed for the discovery of emergent themes from rich and varied data sources. This concurrent method for collecting and analyzing data helped the researcher move fluidly between reflecting on the current data and generating strategies for the collection of new data as needed (Miles, Huberman, & Saldana, 2020).

As data was being collected and transcribed as necessary, the researcher was analyzing data through coding methods using Microsoft excel. Saldana (2016, p. 4) defined a code as "most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data." Using coding as a method for analysis, the researcher was able to quickly retrieve and reflect on data as they relate to particular research questions, concepts, or emergent themes (Miles, Huberman, & Saldana, 2020). The use of a codebook is necessary to define the codes being used within the analysis of high volumes of data. Descriptive, In Vivo, and Process coding were all used as a starting point

in First Cycle coding. Descriptive codes assigned a label that summarizes data in a single word or short phrase. In Vivo coding used short phrases and words pulled from the participants' own language in the data record as code terms. Process coding used "-ing" words to connote actions.

In addition to the First Cycle coding process, which was used to initially summarize and organize segments of data, Second Cycle coding occurred through pattern coding. This method was used to group and summarize data into smaller themes or categories (Miles, Huberman, & Saldana, 2020). Theming of the data was used to narrow and focus on aspects of the data to identify themes as they emerged naturally (Guest, MacQueen, & Namey, 2012). According to Rubin and Rubin (2012), "Themes are statements *qua* (in the role of) ideas presented by participants during interviews that summarize what is going on, explain what is happening, or suggest why something is done the way it is (p. 118)." Through Pattern Coding, more inferential descriptions and themes were generated to use for analysis of the data and interpretation in the findings. The purpose of thematic generation through Pattern Coding was to condense large amounts of data into smaller analytic units and engage in analysis through the data collection process (Miles, Huberman, & Saldana, 2020). These Pattern Codes were included in the codebook along with the initial codes from First Cycle coding that define the larger theme.

Ensuring Rigor

A limitation of this research design included the time-consuming nature of qualitative research due to laborious data collection procedures and coding processes. However, as stated earlier, the depth and breadth of data that can be collected and analyzed regarding teachers' experiences, beliefs, and opinions about assessment literacy and the assessment process outweighed the drawbacks of case study research. To increase the efficiency of data collection,

the strategies of using open-ended surveys and focus group interviews produced large amounts of data in a timelier manner (Miles, Huberman, & Saldana, 2020).

It is important to recognize and reflect on the researcher bias that was unavoidable in this study. The researcher conducting this study is a member of the elementary teaching staff within the district selected for the study. However, to avoid researcher bias, measures to ensure data quality included outlining and making public clear intentions for the participants in the study through informed consent and triangulation of data sources (Miles, Huberman, & Saldana, 2020). Data were triangulated from multiple sources, including surveys, focus group interviews, and artifact reflections, to ensure a convergence of themes from various perspectives and participants (Yin, 1999). Through follow-up interviews, member checking was employed as a strategy to certify accuracy from the participants themselves as well as prevent subjectivity during coding. (Miles, Huberman, & Saldana, 2020).

To ensure confirmability and dependability, the researcher took steps suggested by Yin (2009) to document precisely and thoroughly the procedures, data collection process, and codebook used within this case study. This included documenting steps taken in the development of the survey instrument, interview protocol, and artifact-reflection questionnaire so that the study could be replicated. Cross-checking of transcripts and the codebook sought to guarantee internal reliability and consistency throughout the study (Miles, Huberman, & Saldana, 2020).

A limitation of this study was that, because of this being a purely qualitative study, findings are not generalizable nor indicate cause or effect. However, to increase credibility and transferability to similar contexts as those delineated in the sampling criteria, efforts were made by the researcher. These included clear and coherent findings, context-rich and meaningful descriptions of methods and data collection procedures, and conclusions were checked for

accuracy by the participants (Miles, Huberman, & Saldana, 2020). In addition, the characteristics of the context and participants were thoroughly described, and samples were as diverse as the context allows.

Positionality Statement

As an elementary school teacher and Learning Disabilities Teacher Consultant, the researcher was aware of the role teachers play as assessors. However, the researcher wanted to know more about how teachers viewed themselves in this role and what aspects of assessment literacy teachers in a high-performing district place value on. The researcher is a teacher in the district being studied and was curious about the beliefs and conceptions of teachers within this district as they relate to assessment. The researcher's role within the district could have posed a question of researcher bias. Through thoughtful methods such as triangulation of data sources, member checking, and peer debriefings outlined earlier, steps were taken to ensure data quality throughout the research process.

Ethical Considerations

Approval through the Institutional Review Board was obtained before conducting research for this study as it was necessary to conduct ethical research with participants involved. In addition to approval through the Institutional Review Board, local permission was obtained from the school district Superintendent and participants. The school district and participants were informed of the general purpose of the study before obtaining written consent. While collecting data, the researcher was cognizant of the interview and survey language used in questioning to avoid leading questions and to represent participants' perspectives accurately. Fictitious names or aliases were assigned to participants when presenting findings to respect the anonymity and privacy of participants. Copies of the research study were provided to participants and

stakeholders to ensure transparency of the data reported. Raw data and participant information were stored securely (Creswell, 2013; Mertens & Ginsberg, 2009).

Assumptions, Limitations, and Delimitations

When understanding the background and identifying a problem, thoughtful decisions were made when selecting a case study location, participants, and research questions. The decisions made have implications related to how the findings of this study can be interpreted and generalized to other settings. This section outlines limitations that should be addressed from the onset in order to promote fair, ethical, and appropriate use of the findings.

The findings of this study are only applicable to the particular case being studied and cannot be generalized to other contexts. Due to this study being purely qualitative, findings are not generalizable nor indicate cause or effect. However, to increase credibility and transferability to similar contexts as those delineated in the sampling criteria, efforts were made by the researcher.

In addition, a limitation of this study was the time-consuming nature of qualitative research design due to laborious data collection procedures and coding processes. To promote efficient data collection, the researcher selected to use open-ended surveys and focus group interviews to produce large amounts of data in a timelier manner (Miles, Huberman, & Saldana, 2020).

Essential to identifying limitations of this study was recognizing and reflecting on the researcher bias that is unavoidable in this study. The researcher conducting this study is a member of the elementary teaching staff within the district selected for the study. Reflexivity strategies, including member checking, peer review, and keeping an "audit trail" of researcher thoughts were selected to acknowledge and mitigate researcher bias (Berger, 2015).

45

Chapter IV

Findings

The purpose of this study was to explore how teachers in a high-performing school district and describe assessment literacy in practice as well as negotiate their personal beliefs about assessment within their educational context. This study aimed to provide insight into how teachers in a high-performing school district prioritize aspects of assessment practice in their own words. This chapter presents the findings for the following research questions:

1. How do elementary K–5 teachers in a high-performing school district define the necessary knowledge and skills of an assessment-literate teacher?

2. How do elementary K–5 teachers in a high-performing school district describe assessment literacy within their teaching practice?

3. How do elementary K–5 teachers in a high-performing school district describe the contextual influences that they must consider as it relates to their assessment practice?

4. How do elementary K–5 teachers in a high-performing school district negotiate their personal beliefs and conceptions about assessment within their educational context?

The findings of this study are aimed to inform the planning of future professional development in assessment and have implications for future research and policy.

In this qualitative case study, the experiences of teachers were shared through the collection of three data sources: open-ended surveys, focus group interviews, and artifact-based self-reflection. Using purposive single-case sampling, participants were recruited and chosen for this study to represent K–5 elementary school teachers from six elementary schools within a high-performing school district. The data collection and analysis process occurred simultaneously through this research study. As survey data were collected and then analyzed, the

selection and recruitment of focus group interview participants occurred as well. As interviews were conducted and artifact-based reflections were collected, data analysis occurred through an inductive coding process and allowed for the discovery of emergent themes from rich and varied data sources. Triangulation of data sources during analyses had the goal of ensuring rigorous findings.

This chapter details the findings from each of the three data sources utilized. Descriptions of how data were analyzed, as well as findings from each source, will be included. This chapter also includes themes that emerged throughout the analysis as they relate to the research questions. Finally, a summary will conclude this chapter.

Participants

Participants were recruited through email, and upon receipt of written consent, surveys were distributed via email with a link to the Qualtrics survey. Overall criteria for sample consideration included (a) willingness to participate in the study; (b) availability of teachers within the selected New Jersey school district teaching grades K through 5; (c) teachers who had at least one year of teaching experience in the specific district being studied to be able to examine situational experiences with assessment practices. Teachers considered for this study represented diverse profiles and levels of experience within the educational context being studied. The 16 survey respondents represented varying levels of teaching experience, as detailed in the following chart.

Figure 3

Participants by years of experience.

Years of Experience
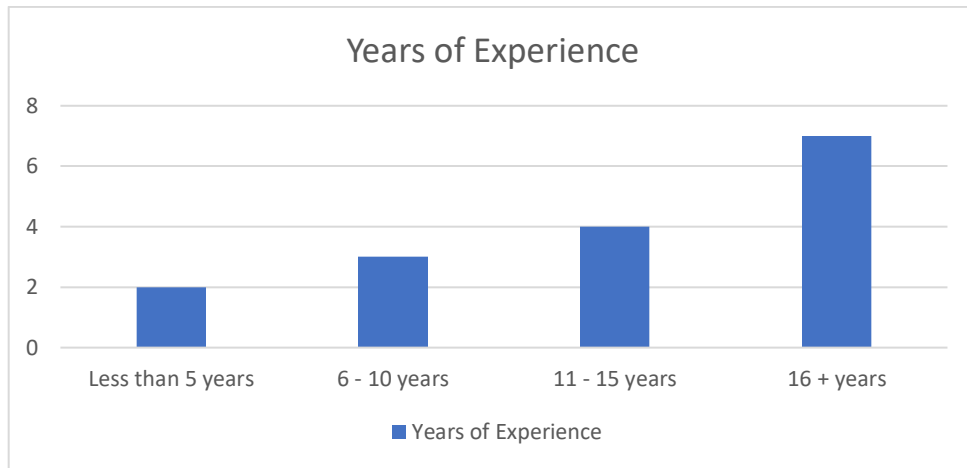
Note. Number of participants grouped by years of experience.

Upon completion of the survey, participants were selected to participate in one of two focus

group interviews. Participants were selected to represent varying levels of teaching experience.

Further details of the focus group participants can be found in the following chart.

Figure 4

Focus Group Interview Participants

Participant	Years of Teaching Experience
Isla	**2**
Rose	**13**
Catherine	**21**
Katelyn	**21**
Madison	**9**
Pearl	**20**

Note. Focus group participants years of experience

48

Due to concerns about the COVID-19 pandemic, all focus groups were conducted via Zoom video conferencing software between April and May of 2021. In addition, the artifact-based reflection was conducted via Qualtrics software to collect plentiful data in a safe and efficient manner. The findings presented in this chapter describe the themes that emerged from the survey responses. The narratives of the participants represent their experiences during the time of the 2020–2021 school year.

Findings: Major Theme Strands by Research Question

This section presents the major findings of the study based on the data that emerged from the coding process. Descriptive, in vivo, and process coding were used as a starting point in First Cycle coding. In addition to the First Cycle coding process, which was used to initially summarize and organize segments of data, Second Cycle coding occurred through pattern coding. This method was used to group and summarize data into smaller themes or categories. Pattern coding of the data was used to narrow and focus on aspects of the data to identify themes as they emerged naturally (Miles, Huberman, & Saldana, 2020; Guest, MacQueen, & Namey, 2012).

Table 1

Summary of Codes, Categories, and Themes

Themes	Teachers perceive assessment as a fluid and reflective process used to drive instruction and target student needs.	Teachers in a high-performing school district describe assessment literacy within their own practice through three major lenses: Planning, reflection, and revision.	Teachers feel bombarded by competing demands of micro and macro contexts.	Teachers describe the development of assessor identity as an evolving process.

Categories	Foundational knowledge base shared by assessment literate teachers

Many factors influence assessment design and use | Reflective teaching practices | Competing influences are places demands on teachers regarding assessment practice

Influences can be at the local level or broader political influences | Personal experiences hold significance for teachers

Teachers set goals for assessment experiences for students

Professional development and collaboration with peers are prioritized by assessment literate teachers |
| Codes | Knowledge of Purpose
Knowledge of Interpretation
Knowledge of Methods
Drive Instruction
Student Needs | Evaluation
Reflection
Methods
Interpretation
Drive Instruction
Assessment
Development | Negative Feelings
Positive Feelings
Accountability
Decision Making
School-based Influences
District-based Influence
Policy Demands | Bias
Negative Experiences
Positive Experiences
Lack of autonomy
Goal Setting
Professional Growth
Reflective Practice
Collaborative Assessment Practices |

The major themes that emerged are presented under the research question to which they most closely align.

Theme from Research Question #1

The first theme is that teachers perceive assessment as a fluid and reflective process used to drive instruction and target student needs. Through the data collection process, teachers described their experiences surrounding all aspects of the assessment process within their

teaching practice. Teachers were asked to reflect on their own practice as well as the context that they work in. The majority of participants in a high-performing school district define assessment literacy by describing a teacher's ability to demonstrate a common knowledge base. Through analysis of all three data sources, four basic foundational knowledge bases emerged, which teachers cited while defining an assessment-literate teacher: knowledge of purpose, knowledge of methods, knowledge of interpretation, and knowledge of how assessment drives instruction. I organized these four basic understandings as questions that can be answered by "assessment literate" teachers according to responses from participants.

Knowledge of Purpose – Why are we assessing?

Teachers described that knowing why certain assessments are more appropriate than others given various contexts is a core foundational understanding of assessment literate teachers. 9 out of 16 participants mentioned words like "gather information," "evaluate what students know," and "demonstrate student understanding," which are related to the theme of purpose. One teacher, Catherine, stated, "I would define the term 'assessment literacy as the understanding how to assess what your students know and can do.'"

> Another teacher, Rose, described knowledge of the purpose of assessment by sharing, "In math, we give end of unit assessments that were created by our math program. We give two different assessments. One measures how well the students understand the skills and concepts from the unit, while the other measures how well the students can apply those skills."

Teachers shared that assessments serve varying purposes depending on the goal they have when selecting appropriate measures.

Knowledge of Methods – How are we measuring student learning?

Teachers described a variety of formal and informal assessments that they administer to students. In addition, they shared that decision-making around how assessment measures are administered is essential for assessment literate teachers. For example, teachers described determining if assessments should be given individually, in small groups, or in a whole group based on the needs of the student and the purpose of the assessment.

One teacher explained knowledge of methods by stating, "Informally, I assess them on their participation in class, classwork, and homework. In a more formal way, I assess using tests, projects, and end of unit culminating activities." Another teacher added that knowledge of methods can also include how assessment occurs by describing, "Some assessments are done individually, some in small groups, and some whole group." 10 out of 16 teachers mentioned words like "formative," "summative," "informal and formal," "benchmark," and "rubrics," which are related to the knowledge of various assessment types or methods. These participants shared that all types of assessments are utilized within their practice and can serve varying purposes for data collection.

Knowledge of Interpretation – What is this assessment telling me?

According to participants knowing what to do after administering assessment is essential to assessment literacy, as described by Isla: "Assessment literacy as it relates to teachers is defined as being able to determine and understand certain assessments and how to apply the findings to your teaching" Samantha added, "Being a math support teacher, I use data from classroom assessments, along with Universal Number Sense Screener tools to determine if my students are meeting benchmarks, and to help see where there may be gaps in understanding."

12 out of the 16 participants mentioned words like "determine," "understand," "interpret," or "evaluate," which are associated with the knowledge of the interpretation code used. These participants in the study shared that data interpretation is a time-consuming but essential aspect of their assessment practice.

Knowledge of How Assessment will Drive Instruction – What will I do next now that I know this information?

Teachers shared in their responses that a key factor of assessment practices is what occurs after assessments are administered. 3 out of 6 focus group participants described feelings of frustration when assessment tasks are requested by the school or district and then never looked at again. These same 3 participants described placing value on assessment tasks that help make instructional determinations such as forming student groups or lesson planning. One participant, Maddy, described the process of using assessment data to drive instruction by stating,

> It is what we are constantly doing as educators, using formal and informal assessments to find out what a student is able to do/show and then use the data to further drive our instruction, be it reteach, reinforce, or move forward with the next level of instruction.

Denise added,

> "I use information from my assessments to group students together who have similar reading strengths and weaknesses. Additionally, information from these assessments is used to determine which skills I will target during my instruction. As an example, I may have multiple students who read fluently and accurately but struggle with comprehension; those students are then grouped together to focus on reading comprehension. Some students do fall into a global group and need support in all areas of reading (phonemic awareness, phonics, comprehension, fluency, and vocabulary)."

Teachers in the study described that decision-making based on assessment data collected is a primary goal of their practice; however, they lack opportunities to collaborate with colleagues about these decisions.

Theme from Research Question #2

The second theme is that teachers in a high-performing school district describe assessment literacy within their own practice through three major lenses: Planning, reflection, and revision. The researcher asked participants various questions throughout the study, which prompted them to engage in reflective teaching practices and describe aspects of their assessment practices. Participants' responses fell into three categories which I labeled as lenses. These three lenses are all associated with the theme of reflective teaching practice: planning, reflection, and revision. It is through these elements of the reflective teaching practice cycle that teachers describe themselves as being assessment literate.

Planning

When describing their assessment practices through the planning lens, 10 respondents shared that they think about the type of assessment to use, specifically formative or summative. In addition, the format of assessment is an important aspect of planning, according to teachers. When reflecting on planning, 10 teachers mention that they select assessment tools and modifications to address diverse student needs.

Katelyn describes aspects of planning by stating, "I try to select appropriate assessment measures to assess student learning. I use observations, checklists, and informal assessments." Maddy added in the artifact-based reflection a description of the assessment planning process as follows,

We have used a new formal tool this year to assess reading. The online tool Literably has

been implemented in lieu of the DRA+2 assessment this year due to remote/hybrid

instruction. It assesses students' ability to orally read, their fluency as well as their

comprehension with both factual and inferential questions, as well as asking them to

retell the story in their own words. I have used this tool in the classroom as well as

informal Running Records. The expectations are that all students are working

independently as using a whisper voice when speaking or independently reading as this is

most often done during the reading block of the day. Students are brought to the kidney

table to be given privacy and distance from peers.

Thus, these data provide evidence that teachers described selecting and designing appropriate

measures to assess student learning by considering their goal for data collection as well as

student learning styles and needs.

Reflection

Teachers were asked how they determine if the assessments they administered were

appropriate as well as what factors are important when interpreting assessments. Responses

generally included teachers' explanations of their reflection process and what conclusions they

could draw from the data they collect. For example, 12 teachers describe how assessment data

helps them determine or measure student learning and identify areas for further instruction. They

can do this by using assessment data to identify strengths and weaknesses as well as

commonalities within and across students. Teachers most frequently described how reflection on

assessment data is useful for the formation of ability-based and/or skill-focused strategy small

groups, as evidenced by the 12 respondents that mentioned these terms.

For example, Rose described the reflection process she engages in after administration of

a standardized reading assessment, the Development Reading Assessment (D.R.A.),

> After administering and scoring the D.R.A., I used the information to plan my small
>
> group reading instruction. I grouped students into five different guided reading groups
>
> based on their independent reading levels. I planned lessons based on areas of weakness
>
> I noted when scoring each assessment. The results of this assessment helped me
>
> restructure my guided reading groups and plan a few lessons for each group. It also helps
>
> me monitor which students are below, on, or above grade level at different points in the
>
> year. I am able to use this information for report card comments and parent-teacher
>
> conferences.

Samantha added,

> When creating an assessment, it is important to have a clear goal for that assessment. Is
>
> it to measure the degree of mastery of content taught? If so, questions need to match
>
> current instruction. Is the intention to guide future instruction? Then, items need to also
>
> reflect novel application of concepts as well as pre-assessment of new skills. In either
>
> case, assessments need to be clear in language and free of visual clutter.

Thus, these data points provide evidence that participants believed that the reflection phase of

their assessment practice allows them to make instructional decisions as well as determine

elements of assessments that might need revision.

Revise

When explaining their assessment practices, 10 out of 16 respondents explain what they

do next after collecting and interpreting data. For example, all 10 of these teachers describe how

they use the assessment data to determine the next steps in instruction, such as reteaching or

extending the material. In addition, teachers form small groups for instruction based on common needs identified in assessments. For example, Denise described how she utilizes data from assessments to make instructional decisions as well as revise assessment tools as needed,

> These tools measure student performance based on expectations of all students reading at a specific level or in a certain grade. Both assessments were developed using research studies and are strong indicators if students are above, below, or meeting grade-level expectations. While not every student will achieve grade-level expectations, these tools are still appropriate measures of student performance and help me observe early reading behaviors and what areas of growth are needed.

> As part of the Observation Survey, students take a word recognition test where they are expected to read words with automaticity. The word "bench" comes immediately after "ocean," and frequently, students say "beach." I know if they are truly looking closely at the spelling of the word, they should recognize the n in bench, but because it follows ocean, many students get it incorrect. This makes me wonder if the word was further down the word list if students would read it accurately.

Isla elaborated on the process of identifying a purpose for assessment and then using the data to inform instruction,

> "It is important to do an overall assessment to see what the student has retained, knows, and is unsure of. While assessing students, I pay attention to which students can complete the assessment independently and who needs more teacher prompting. This process helps me differentiate instruction towards each student."

Thus, these data provide evidence that teachers engaged in the revision of their practice through reteaching or adapting assessment measures grow as professionals, and in turn, develop an assessor identity.

Theme from Research Question #3

The third theme is that teachers feel bombarded by competing demands of micro and macro contexts. The researcher asked participants to describe factors that influence their assessor identity, especially their ability to make decisions regarding assessment practices. Teachers in a high-performing school district describe contextual influences in two categories: Micro contexts mentioned during six separate incidences and macro contexts mentioned more frequently with 22 incidences. Micro contexts can be described as the influences that are "closer to home" and specific to the district in which teachers find themselves. Examples that teachers cited include but are not limited to district curriculum or testing requirements, assessment tools from selected district approved series and programs, expectations of district parents, and Individualized Education Programs for specific students. For example, Leslie described an example of a district assessment requirement that teachers are expected to follow, "Students are given assessments in literacy three times a year: fall, winter, and spring. Each student is assessed by the teacher one at a time for reading assessments. This takes time to complete with a whole class."

Rose also described how she experienced a change in district assessment procedures and expectations throughout her teaching career in Holly School District,

> Also, think at this point, the district has so many assessments that we're supposed to do. I feel like, you know, earlier when I was teaching in Holly School District, I feel like we made more assessments ourselves, but now I feel like we're given so many that that's not as necessary. But it's just the time to really analyze and then use that data. Cause what's

the point, if it's just going to sit in a pile or in a drawer or on a spreadsheet and you're not looking at it like there's no reason to even give it.

Additionally, Samantha elaborated on district demands by stating,

"I utilized the "Universal Screener for Number Sense" by Forefront Education. This tool was chosen by the math supervisor and B.S.I. team because it was a widely used universal tool and was performance-based. We felt that this would give us more reliable data regarding gaps in math understanding."

Respondents described micro context influences on 22 separate incidences throughout the study, indicating that local district expectations are at the forefront of teachers' minds while describing their assessment experiences.

Macro contexts refer to the broader environment that influences assessment, such as state and federal government influences. Examples mentioned by teachers include state testing requirements, state data collection for accountability, and Student Growth Objectives (S.G.O.s). When reflecting on what has changed or stayed the same in assessment since he was a student, Ian describes the macro context influence of state testing, "State testing requirements have become more rigorous, and the state of New Jersey has had more days and amounts of tests. What has stayed the same is students being nervous about high-stakes testing."

Katelyn added regarding state testing requirements and the frustration she experiences,

Well, in the upper grades, we have the Link It test, it's like a mimicking of the PARCC tests, and it's, it's terrible. I mean, they, so we have that like twice, two or three times a year, and then we have the practice test for the PARCC, and then we have in math, they have test, test, test, test tests. And, um, it seems like every time you turn around, they're looking at data, they're talking about data and, you know, literally tests to measure their

levels. The kids are tested two or three times a week on something. And it's burning them

out. I don't think they care about the test. Some of them, and some are getting nervous,

but some are just like, Oh, here we go again.

Thus, all these data provide evidence that teachers in the study experienced frustration from the

pressures from micro and macro contexts and their negative influence on their assessor identity.

Theme from Research Question #4

The fourth theme is that teachers describe the development of assessor identity as an

evolving process. Teachers in a high-performing school district describe various beliefs about

assessment. Beliefs are developed based on one's experiences with assessment as a student as

well as experiences observing current students. One common trend, as mentioned by 13 out of 16

respondents, is that assessment has changed. The changes that teachers described mostly

identified shifts in assessment purpose and assessment format. Another common idea gleaned

from 24 codes related to emotions identified across participants is that teachers describe both

positive and negative emotions associated with assessment experiences that have shaped their

belief system and practice. The overwhelming majority of experiences and emotions shared by

teachers were negative, as evidenced by the 19 negative codes and only five positive codes

related to emotions. When describing their own teaching practices, teachers often made goal-

setting claims describing how they would like to do things differently in their own classrooms

than how they experienced assessment. This demonstrates an example of a well-developed

assessor identity given that the teachers expressed their ability to engage in reflective teaching

practices to design their instruction in a way that benefits student needs.

Katelyn described a positive emotion attached to an assessment experience as a student as

follows,

I remember 3rd grade, where we started to have to memorize the multiplication facts, and we had to fill out this narrow piece of paper and like put all the facts down. And if we got them all right, she put them up in the, um, train that went around the room, and there was no pressure. It was like, if you got the twos net today, or next week, whenever you got them, they went up there. And I really, I loved that teacher. It always made me feel good because it didn't matter when you got to put in the train. And I remember, in college, I'm a good writer. I'd like to write a teach writing. I loved like the open-ended questions. So, I enjoyed that kind of a thing for assessment.

Rose, on the other hand, described a negative emotion attached to an experience with assessment,

"I don't have many memories of assessments, but I recall feeling very nervous and worried and feeling like I'm not ready for this, or I'm going to do poorly on this. Or like, honestly, my most vivid memory is getting an assessment returned to me that I didn't do well on and being very upset about it and like excusing myself to the bathroom, you know, to go be upset."

Catherine explains how beliefs can shape her practice using words that were consistent across many participants' responses, including "anxiety" and "nerves/nervous":

I feel like whenever I am assessing, like, I try and make it like not a big deal. Like, you know, we're just checking in to see how things are going, you know, because I think I, I'm not a good test taker. And so, I have like a lot of anxiety and nerves around assessing, and I don't want to put that on to my little 1st graders.

Respondents shared that their own experiences are associated with both positive and negative emotions, which shape how they view assessment culture for their own students.

Throughout the research study, teachers described "pressures" from various contexts, both micro and macro, which do not align with their beliefs. This was most often described through negative emotions noted in nine incidences. Teachers in a high-performing school district describe accountability tasks put in place by micro and macro context influences as hindering their assessor identify specifically limiting their decision-making power as evidenced in the number of "decision making" codes. Fifteen participants expressed feelings of lacking autonomy in their decision-making regarding which assessment tools to use. For example, Katelyn describes district influences as follows,

> "For writing, I have to follow curriculum so Literably, D.R.A., Link it and Writing pieces.   If left to my own devices, I would not use any of these. When I taught 4th-grade math, I had to give math tests. Which I felt were too difficult for some. And I knew the struggling students without giving them the test.

Pearl elaborates on the feelings of frustration that she experiences when it comes to micro context influences of supervisors' expectations,

> So, and especially at our level, especially at our level. So, so many things get left behind, and there is that fear, you know, your whole team must be on your page, and you all have to kind of go together because then there's too much of a discrepancy. And I'm sure that, you know, the supervisor would say just like all the supervisors would say 'no, no, you know, what's the best move at your own pace.' If you need to make a change to the assessment, make a change to the assessment. But that language must be continuously used. And we need to continuously have that kind of conversation because . . . and it takes us time again to make the adjustments that are needed to get the children to be able to take one of those Math in Focus tests. It's a lot of work to alter that test. Quite

honestly, you need to throw the whole thing out and start over again, but who has that

kind of time?

Madison describes the frustrations of lacking decision-making power within the district,

But it's also been really frustrating for a lot of my kids who just like aren't ready to do so. I mean, some of those problems are just so, so hard. And while sometimes you see a kid who you're like, oh, I had no idea. You could even like, begin to approach a problem like this. And you did very well, or like you took the right steps to get started on this, but then other kids, it's just so frustrating because they're really hard, challenging questions. And I like, I don't know, sometimes I'm like, why are we giving this? Is this really appropriate for all kids in class to be taking? And it's a little frustrating.

Respondents' frustrations and lack of autonomy in decision making is an influencing factor in the development of assessor identity as they negotiate these emotions and experiences along with knowledge of best practice and context influences.

While participants describe in detail the frustrations that they face which hinder their assessor identity. Six out of 6 focus group participants also explain solutions to the issue and self-identify areas of need for professional growth in opportunities for their assessor identities. For example, they express the need to have a collaborative dialogue about assessment and data, more training, and courses in the interpretation of assessment data to drive meaningful instruction. For example, Earl stated that professional development needed is on the interpretation of assessment data:

I could use more, and I don't mean just showing me the Link It data that, you know, all these red and green marks, I mean more like tailoring my curriculum and using authentic assessments. That will be really nice to learn about.

Isla adds, "I agree with the P.D. on interpreting the data that you get from the assessments. That would be truly helpful, especially for new teachers." Rose describes the need for more time for professional dialogue with colleagues, "I feel like there could be more discussion about like, and like professional development about like taking your data and actually doing things with it. And we've started doing more of that." Overall, teachers in the study were articulate in sharing that assessment literacy is dynamic and, through professional opportunities, can be improved upon. Moreover, these data suggested that teachers believed their assessor identity develops and changes over time with increased assessment literacy and professional opportunities.

Summary of Findings

Summary of Findings from Research Question #1

The findings related to research question #1 illuminate how teachers define assessment literacy by describing key understandings. Teachers described assessment literacy as a foundational knowledge base that includes understanding why and how assessment practices occur. The four categories of understandings that teachers articulated were knowledge of purpose, knowledge of methods, knowledge of interpretation, and knowledge of how assessment drives instruction. Teachers in a high-performing school district described assessment literacy by sharing the fluid nature of assessment. Based on the responses of participants, assessment literate teachers know that there are various assessment types and methods which should be administered based on the goal of the data collection. In addition, assessment literate teachers know that assessment data can be used to gain information about their students and make instructional decisions.

Summary of Findings from Research Question #2

Participants were asked to share their assessment practices and, through responses, described elements of assessment literacy. Teachers described their practices through the framework of reflective teaching, including elements of planning, reflection, and revision. Teachers in a high-performing school district shared that assessment literate teachers consider factors such as student needs and assessment purpose while planning. Participants also described that reflection is an important part of the reflective teaching practice since assessment literate teachers utilize data to learn more about their students and teaching practice. Assessment literate teachers described that administration of assessment is only one part of successful assessment practice. There are essential steps beyond simply collecting data that participants described, such as analyzing and reflecting on data and then creating instructional plans and student grouping based on needs. For example, how do they interpret assessment data, and how is it used to make meaningful instructional decisions. Reflective teaching practices were a common thread that emerged as teachers described themselves as assessors and demonstrated the development of their assessor identity.

Summary of Findings from Research Question #3

Participants were asked to reflect on the context in which they teach and how that influences their assessment practices. The findings in this study also highlight how teachers are faced with the challenge of negotiating their knowledge of best practice along with their personal beliefs and contextual influences. Responses demonstrated that teachers more often describe negative experiences and emotions associated with assessment from their lives as students. They also often used words such as "anxiety" and "nervous" when discussing how they believe assessment impacts their students. Teachers often share that their goal is to lessen these emotions and to create a positive assessment environment in their classrooms. Participants described a

variety of contextual influences which are also at play when making assessment decisions. Teachers share that these influences frequently detract from their development of an assessor identity by lessening their decision-making abilities. Teachers describe pressures from macro contexts, such as state testing, as well as micro contexts, namely district curricular requirements, that influence their ability to select assessment tools.

Summary of Findings from Research Question #4

Teachers described the tension that is created by the negotiation of their personal beliefs, context, and knowledge of best practices and recognized the need for professional development in their assessor identity growth. Participants in the study shared many negative emotions associated with the demands of the accountability culture that exists today. They often feel that assessments are given for data collection purposes or to make decisions without enough interpretation. Participants also reminisced about their own experiences with assessment as students and often shared negative emotions associated such anxiety and nervousness. Teachers, in turn, discussed how they create goals for their students when it comes to assessment to lessen these feelings in students and allow their true learning to be evaluated. However, teachers also expressed that while they hold certain beliefs, the demands of state-testing and district data collection do not allow their goals to be met. This tension between their beliefs and the context they find themselves in hinders their confidence and development of an assessor identity. Teachers often expressed that they lacked the autonomy to own decision-making when it comes to the assessment practices within their classroom.

While teachers expressed many frustrations and hindrances to their assessor identity development, they also expressed a desire to grow as evaluators. Teachers in a high-performing school district self-identified areas for growth in aspects of assessment literacy, which

demonstrated a desire to grow as assessors. The areas most frequently identified for assessor identity development were the interpretation of assessment data and support in using data to plan targeted and meaningful instruction. It is clear, based on their responses, that the teachers in this high-performing school district believe engaging in reflective teaching practices would allow them the time to reflect on inherent biases as well as context influences and grow as assessment literate teachers. They often expressed that professional opportunities to spend time with data that has been collected and engage in dialogue with colleagues would enhance their assessment-based decision-making and instructional choices.

Chapter 5 provides a summary of the study's purpose and methods as well as findings through the data analysis and a discussion of the results of the study. This chapter also incorporates the conclusions and implications for policy, practice, and research.

Chapter V

Conclusions and Implications

The purpose of this study was to explore the experiences of K–5 teachers in a high-performing school district, focusing specifically on assessment practices. More specifically, it explored how teachers in the selected district describe assessment literacy in practice as well as negotiate their personal beliefs about assessment within their educational context. The study used a qualitative case study methodology to gather data and allow teachers to describe their experiences in their own words. The data were collected through three data sources: open-ended surveys, focus group interviews, and artifact-based reflections. Interviews were conducted using video conferencing software and open-ended surveys, and artifact-based reflections were collected through Qualtrics online survey software. Write about analyses and how you used triangulation to develop categories and themes.

In this chapter, the findings of Chapter IV will be reviewed as they relate to the research questions. Findings will be discussed in relation to the study's theoretical framework and literature review. Implications for future policy and practice will be addressed. And, finally, recommendations for future research will be suggested based on the study's limitations and delimitations as well as questions that arose throughout the study.

Summary of Findings in Relation to Research Questions

To explore how teachers in a high-performing school district understand their identity as assessors, this study asked how elementary K–5 teachers in a high-performing school district define the necessary knowledge and skills of an assessment-literate teacher. Specifically, to better understand their assessment practice, this study asked how elementary K–5 teachers in a high-performing school district describe assessment literacy within their teaching practice.

Additionally, this study sought to gain a better understanding of the contextual influences on teachers' assessment practice by asking how do elementary K–5 teachers in a high-performing school district describe the contextual influences that they must consider as it relates to their assessment practice? Finally, this study was interested in exploring how teachers negotiate their own personal beliefs about assessment with their evolving knowledge base and context influences by asking how do elementary K–5 teachers in a high-performing school district negotiate their personal beliefs and conceptions about assessment within their educational context?

Four major themes emerged through the coding process while analyzing the data collected. The four themes are as follows:

1. Teachers perceive assessment as a fluid and reflective process used to drive instruction and target student needs.

2. Teachers in a high-performing school district describe assessment literacy within their own practice through three major lenses: Planning, reflection, and revision.

3. Teachers feel bombarded by competing demands of micro and macro contexts.

4. Teachers describe the development of assessor identity as an evolving process.

These themes will be discussed in relation to the study's theoretical framework and reviewed prior scholarship surrounding the discourse of assessment literacy.

Discussion

The theoretical framework that was chosen to guide this study's inquiry was reflective teaching. According to prior research, two prominent ways for teachers to develop assessment literacy are by engaging in reflective practice and participating in professional activities (Schön, 1983; Westheimer, 2008). Griffith et al. (2016) present in their research that teachers can refine

aspects of their practice by evaluating pedagogical knowledge, content knowledge, and the complexities of the classroom through reflective practice. Thus, a guiding principle in this study is that teachers' assessment literacy can grow and develop over time with the focused and intentional use of reflective practice. The findings of this study illuminate how teachers in a high-performing school district describe their experiences, specifically as they develop assessor identity.

A widely accepted notion is that teachers' classroom assessment practices have a significant impact on student learning through teachers' instructional decision making as well as students' self-monitoring (Klinger, Volante, & DeLuca, 2012; Black & William, 1998, 2003; Hume & Coll, 2009). Despite this commonly accepted understanding, teachers are rarely provided enough time and opportunities to deeply reflect on their own assessment practice and discuss experiences with colleagues (Klinger, Volante, & DeLuca, 2012). Thus, research suggests a growing need exists to allow the development of teacher assessment literacy skills through meaningful and reflective professional development opportunities. In addition, research is lacking that explores effective professional development activities that will support teacher reflection and learning around assessment (Stiggins, 2002; DeLuca et al., 2010). Using reflective teaching practice as a guiding framework, this study aimed to describe the assessment experiences of teachers to support the ongoing improvement of assessment education and assessment literacy development.

The findings in this study shed light on how teachers describe their own assessment practices and assessor identity. When explaining the development of their assessor identity or describing themselves as assessors, teachers often shared that the knowledge they have of best practice is frequently negotiated with their beliefs and contextual influences. A major finding of

this study is that teachers in this specific high-performing school district defined assessment literacy as a foundational set of knowledge bases that include understanding why and how assessment practices occur. In addition, teachers shared in their responses the need for a deep understanding of what to do with assessment data after it is collected. For example, how do they interpret assessment data, and how is it used to make meaningful instructional decisions. This is similar to the prior literature that discusses teacher knowledge base as being the foundation for the development of assessor identity (Xu & Brown, 2016). According to their Conceptual Framework of Assessment Literacy in Practice, teacher assessment literacy in practice is influenced by teachers' knowledge base along with context influences, personal beliefs, and guiding framework. The framework also suggests that teacher assessment literacy in practice coupled with teacher learning is the driving force that develops assessor identity. Thus, the findings of this study were expected given the conceptual framework of reflective teaching used in the study. For example, a common thread that emerged in teachers' responses was that the reflective teaching practice of analyzing what is working and what is not based on assessment data to inform instructional decisions was important to their practice. This demonstrates strong development of an assessor identity as it indicates that teachers feel their interpretation and interaction with assessment data is crucial to its importance.

The findings in this study also illuminated how teachers are faced with the challenge of negotiating their knowledge of best practice along with their personal beliefs and contextual influences. A major finding of this study is that when describing their personal experiences with assessment as students, teachers more often described negative experiences and emotions and subsequently shared a desire to create assessment environments that do not produce similar feelings for students. Interestingly, when describing the impact assessment has on their students,

they used similar words as when they described their own experiences, including "anxiety" and "nervous." This aligns with prior research on teacher beliefs which supports the idea that teachers' conceptions, whether rational or irrational, are fundamental for how they approach assessment practices (Looney et al., 2018). For teachers to move from a basic understanding of what, why, and how assessments are performed to a more developed sense of assessor identity, they must reconcile their personal beliefs and conceptions with their foundational knowledge base (Xu and Brown, 2016). The findings of this study expand on this understanding by sharing the personal experiences of teachers as they describe how their beliefs impact their assessment practices.

The experiences that were shared by teachers in the specific high-performing school district selected for this study support previously supported findings that both negative and positive incidents have an impact on the goals teachers set for their own students (Brown, 2008). The findings in this study contribute to the theorization of assessment literacy as a dynamic and evolving concept that extends beyond simply a teachers' knowledge base. As described in the participants' lived experiences, assessment literacy is fluid as teachers are constantly making compromises within their practice based on the competing tensions of their personal beliefs and context influences. Teachers in the high-performing school district selected for this study had a well-developed assessor identity as they were able to recognize these tensions through reflective teaching practices, suggesting that advancing assessment literacy is a joint effort between stakeholders.

Furthermore, this study was particularly interested in the experiences of teachers in a high-performing school district since prior research supports that teacher assessment literacy has an impact on student performance. The experiences of teachers within this high-performing

school district could provide insight into the practices of teachers with a well-developed assessor identity. For example, teachers in this specific high-performing school district demonstrated the development of assessor identity is by sharing how they engaged in reflective teaching, recognized their personal beliefs, and created goals for their students in their responses. Teachers described that their goal is to lessen negative emotions and to create a positive assessment environment in their classroom.

An additional major finding of this study is that participants also demonstrated a strong assessor identity by acknowledging the tension of reconciling personal beliefs and context with knowledge of best practices in their responses. This finding is expected based on previous research that presents that teacher assessment literacy in practice is greatly influenced by the negotiation of teachers' foundational knowledge, their personal conceptions, and contextual influences. Teachers in a high-performing school district described a variety of contextual influences which create tension when making assessment decisions. Teachers described feeling that outside influences such as state accountability measures negatively influence their development of an assessor identity by undermining their decision-making abilities. Throughout the study, teachers described pressures from macro contexts, such as accountability culture, as well as micro contexts, namely district curricular requirements, that influence their autonomy as assessors.

A final major finding of this study is that while teachers in this high-performing school district recognize the tension that is created by the negotiation of their personal beliefs, context, and knowledge of best practice, they also describe the need for professional development to continue their growth as assessors. This finding was expected based on the Conceptual Framework of Teacher Assessment Literacy in Practice created by Xu and Brown (2016), which

presents that the goal of assessment literacy is assessor identity development. The framework also suggests that assessor identity is achieved when assessment literacy is furthered by teacher learning. It would be expected that in a district in which rigor and cognitive complexity of assessment tasks is a valued principle that teachers within this district would similarly value and develop this within their practice. Teachers in the high-performing school district selected in this study demonstrated a desire to grow as assessors by engaging in reflective teaching practices and self-identifying areas for professional development in specific aspects of assessment literacy. The aspects most frequently identified for assessor identity development were the interpretation of assessment data and support in using data to plan targeted and meaningful instruction. These findings indicate that teachers with a well-developed assessor identity prioritize professional development and opportunities to participate in professional assessment dialogue in the growth and development of teachers' assessment literacy and, ultimately, their identity as an assessor.

Assumptions, Limitations, and Delimitations

While understanding the context and identifying a problem, thoughtful decisions were made when selecting the case study location, participants, and development of the research questions best suited for this study. However, the decisions made have implications for how the findings of this study may be interpreted and generalized to other settings. This section outlines some of this study's assumptions, limitations, and delimitations to promote fair, ethical, and appropriate use of the findings.

An assumption that was made during this study is that all teachers within the selected school district have opportunities to administer assessments to their students. Another assumption made is that teachers are willing to share honest and accurate experiences with

assessment practices. The methodology, survey questions, interview protocol, and artifact-reflection prompts were designed to elicit honest and clear responses from participants.

Limitations of this study should also be recognized. Limitations pertain to what the data being collected can present and what, by nature, it cannot. For example, the findings of this study are only applicable to the specific case that was studied and cannot be generalized to other contexts. Since this study was purely qualitative in nature, findings are not generalizable nor indicate cause or effect. However, efforts were made by the researcher to increase credibility and transferability to similar contexts as those delineated in the sampling criteria. These efforts included thorough descriptions of sampling criteria and methods. In addition, this case study methodology does allow the researcher to gain an in-depth exploration of teachers' beliefs about assessment practices within a particular district during a specific moment in time.

Another limitation of this study was the time-consuming nature of qualitative research design due to laborious data collection procedures and coding processes. To promote efficient data collection, the researcher opted to use open-ended surveys and focus group interviews to produce large amounts of data in a timely manner (Miles, Huberman, & Saldana, 2020). In addition, data collection was conducted via online survey software and video conferencing software to increase efficiency and participation during the COVID-19 pandemic. Despite the time required to conduct interviews and collect data, the methodology allowed for a thorough exploration of the lived experiences of teachers in a high-performing school district.

A further limitation of this study is within the data analysis. Findings were not differentiated by level of teaching experience or demographics of participants. Additionally, participants were limited to the teachers within the district that were willing to participate in the study. Thus, findings are associated with those who are willing and ready to share voluntarily.

The stories of these participants may be different than teachers who do not have the disposition to participate in the study.

Finally, researcher bias was unavoidable in this study, and it is essential to identify this limitation by recognizing it. The researcher conducting this study is a member of the elementary teaching staff within the district selected for the study. Reflexivity strategies, including member checking, peer review, and keeping an "audit trail" of researcher thoughts, were used to acknowledge and mitigate researcher bias (Berger, 2015).

Delimitations in this study focus on the case study methodology, the selected sample of participants, and the implications that these have on the findings. The researcher chose to focus on classroom teachers who teach academic subjects and not include special area teachers (i.e., fine arts, physical education, music). While these teachers engage in assessment practices, the researcher chose to focus solely on assessment practices relating to core academic subjects (i.e., math, language arts, science, and social studies). Another delimitation was the choice to include only elementary K–5 teachers in this study. This delimitation allowed the researchers to focus more narrowly on the assessment practices with the elementary school setting, where teachers typically work with a single set of students for the entirety of the school year and across all subject areas.

Policy and Practice Implications

The findings suggest that teachers in a high-performing school district consider the development of an assessor identity as an ongoing and reflective process. This section details implications for research, policy, and practice that the findings of this study may have.

Policy and Practice

Based on the research conducted in this study, there are several implications for policy at the federal, state, and local levels. The policy recommendations stated have further implications for practice related to professional development at the district and school levels. The findings of this study indicate that context plays an important role in the ability to develop an assessor identity due to the perceived pressures faced by teachers. Thus, at the federal and state level, context should be incorporated into the accountability frameworks that are used to scrutinize both teacher and student success. Subsequently, this may have implications for resource allocation to assist in the development of assessment standards that account for a dynamic knowledge base based on assessment research and cultural contexts that teachers find themselves assessing in. In addition, the findings suggest that teachers prioritize a strong knowledge base when defining assessment literacy. However, context plays a role in the availability of professional opportunities around assessment. Resources can be allocated to provide equitable opportunities across varying districts for teachers to improve assessment literacy by increasing their foundational knowledge base.

At the state level, another consideration is to increase the required number of hours related to assessments that are required at the pre-service teacher level, as well as continuing professional development for employed teachers. The findings in the study indicate that assessor identity is an ongoing process facilitated through reflective teaching practices. Requiring pre-service teachers to engage in assessment learning as well as simulations of assessment practices such as interpretation of data and instructional decision-making will support assessor identity development. Current teachers in this study expressed the need for professional development in the interpretation of data as well as using assessment to drive instruction.

On the local level, the findings of this study provide guidance to school leaders who design and implement professional development for teachers focused on developing assessment literacy. The shared experiences of participants in this study support prior research, which revealed that teachers who are considered assessment literate are those who consistently reflect on practices, participate in ongoing professional development, engage in professional discourse about assessment, question their own conceptions of assessment, and seek resources to strengthen their identity as an assessor. In addition, the shared experiences of teachers in this study highlight how assessment training must change to directly address the influence of teacher conceptions and context on assessment literacy and assessor identity development.

Local decisions regarding professional development and the culture of teacher learning that exists within a district or school are often driven by the administration. It is important to recognize the role those educational leaders play in the teachers' assessment literacy and assessor identity development. Context influences shared in this study by participants often highlighted demands being placed by administrators. Administrators' own assessment literacy and assessor identity may influence the culture of assessment within the building.

Research

Further research based upon findings within this case study could be explored in a variety of areas. The findings of this study highlight the importance of professional development in teachers' assessor identity development. Thus, one area of potential research is the relationship between participation in professional development around assessment and teachers' perceived assessment literacy. In addition, further research can be explored into the efficacy of professional learning communities designed to encourage discourse about assessment. This research would

contribute to the ongoing dialogue around effective professional development approaches within the reflective teaching model.

While this study focused on assessment literacy and practices of teachers, further research can be done to explore the impact that assessment has on students. This can be done by looking at the experiences of students as they relate to various assessment practices. Another avenue is to explore the relationship between teachers' assessment practices and student learning by analyzing student performance on various assessment tasks. Exploring the experiences of students would add to the existing literature that describes the importance of assessment literacy and the role that it plays in student learning. As noted in the literature review, the demands for higher-level critical thinking skills of students have drastically influenced the evolving assessment landscape for teachers and students. Exploration of how teachers adapt their assessment practices to meet the evolving context demands and the impact this has on student learning and experiences are needed.

As stated earlier, this study focused solely on the assessor identity development and assessment literacy of teachers. However, as context influences and the professional learning culture of a school or district are often driven by or associated with administrators, this area should be further explored. Exploration into administrators' assessment literacy and the impact it has on the assessment culture and teacher learning in the assessment are key areas lacking in current research.

A limitation of this study was the narrow focus on a small sample due to the narrative case study design. Further research could be done to expand on the range of experiences of teachers being explored by looking at the assessment practices of varied school districts across socioeconomic statuses as well as expanding to a wider range of grade levels. As was noted in

the study, research shows that varied contexts can influence the pressures felt by teachers in terms of assessment demands. How the socioeconomic status of a school district impacts these pressures, as well as the availability of resources for further professional development around assessment literacy to stay in line with best practices, should be explored.

Conclusion

After reviewing prior studies on assessment literacy, this study seeks to fill a gap in the literature on the exploration of teachers' lived experiences relating to assessor identity development. This study adds to the existing body of research by highlighting experiences of teachers in a setting in which rigor and cognitive complexity of assessment tasks are expected, and therefore assessment literacy is demonstrated among teachers. This study was interested in exploring the experiences of teachers in a setting that can be viewed as a model for assessment literacy development. The findings of the study indicated that teachers within this setting described assessment literacy as a fluid that requires professional opportunities such as time for collaboration, assessment dialogue, and professional learning.

Through the experiences of teachers in a high-performing school district, four major themes emerged through the coding process while analyzing the data collected. The findings suggest that teachers perceive assessment as a fluid and reflective process used to drive instruction and target student needs. In addition, teachers in a high-performing school district describe assessment literacy within their own practice through three major lenses: Planning, reflection, and revision. Another theme that emerged from this study is that teachers feel bombarded by competing demands of micro and macro contexts. Finally, this research study highlights how teachers describe the development of assessor identity as an evolving process.

Despite the accountability culture in our country and demand for global competitiveness in 21st-century skills, current research has demonstrated low levels of assessment literacy among teachers in the United States (DeLuca et al., 2020). A need exists for assessment literacy to stay up to date with the evolving expectations for assessment that challenges students to think critically and demonstrate proficiency in 21st-century skills. Prior research supports that the development of assessment literacy is something that evolves over time through reflective teaching practices. However, teachers are often not provided adequate professional opportunities to expand their knowledge base and develop their assessor identity (DeLuca, 2012; Lam, 2015). Teachers in this study indicated in their responses that in a high-performing school district that a strong assessment knowledge base exists, but time for reflective teaching practices such as dialogue with colleagues and planning for instruction based on assessment data is lacking. This is an implication for stakeholders that professional growth opportunities must exist in districts for assessment literacy to flourish and teachers to take ownership of their assessor identity.

Additionally, this study sought to add to a gap in the literature that exists around assessment literacy which does not account for new understandings about the importance of teachers' conceptions about assessment as well as sociocultural contexts (policy, cultural and social norms, district-level priorities) that shape a teachers' assessor identity (Xu & Brown, 2016). Thus, this study was designed to illuminate, through the lens of the teacher, how beliefs and contextual factors influence a teachers' assessment literacy in practice. The findings of this study illuminate how teachers in a high-performing school district describe assessment literacy in practice as well as negotiate their personal beliefs about assessment within their educational context. Responses from teachers indicate that teachers lived experiences are a driving force in the goal-setting as they plan, revise, and interpret assessments within their practice. Stakeholders

should recognize that all teachers come to the table with personal experiences, and while they may be rational or irrational, they play a significant role in the assessment culture created within their classroom. Professional development must directly acknowledge this and encourage teachers to engage in reflection on their own experiences and how it affects their practice. Reflective teaching involves the step of grappling with challenges, whether from internal or external factors, and making purposeful decisions about assessment with these in mind.

A key finding of this study is that teachers in a high-performing school district describe the development of an assessor identity as an ongoing and reflective process. If stakeholders were to view this high-performing school district as a model, they would recognize that assessor identity is developed when teachers are self-directed in their assessment practices. As shared through the experiences of teachers in this study, this sense of self as an assessor allows teachers to interpret assessment policy expectations at the local and state level and make accommodations to their own practice. The experiences shared in this study also describe how teachers in a high-performing school district reflect on their assessment practice and advocate for the continued development of assessment literacy.

Finally, the findings of this study have implications for continued research, policy, and practice that seek to raise awareness of the importance of professional development around aspects of assessment literacy on teacher's assessor identity development. Specifically, we can learn from the high-performing school district that was selected the importance of reflective teaching. Teachers require opportunities to engage in professional dialogue to negotiate the tensions of context influences, personal bias, and understandings about best practices in assessment. As accountability culture places more demands on teachers to "teach to the test" and demonstrate student growth, this need is greater than ever. The experiences of teachers in this

study indicate that teachers' conceptions and context influences are contributing factors to teachers' developing assessor identities. They are complex dynamics that are essential in constructing a more comprehensive view of teacher professional development and assessment literacy development.

<div align="center">**References**</div>

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Appendix

January 29, 2021

Marlena Celebre-Baird
Seton Hall University

Re: 2021-174

Dear Marlena Celebre-Baird,

At its January meeting, the Research Ethics Committee of the Seton Hall University Institutional Review Board reviewed and approved your research proposal entitled, "Exploring Teachers' Assessment Literacy in a High Performing School District" as submitted. This memo serves as official notice of the aforementioned study's approval. Enclosed for your records are the stamped original Consent Form. You can make copies of these forms for your use.

The Institutional Review Board approval of your research is valid for a one-year period from the date of this letter. During this time, any changes to the research protocol, informed consent form or study team must be reviewed and approved by the IRB prior to their implementation.

You will receive a communication from the Institutional Review Board at least 1 month prior to your expiration date requesting that you submit an Annual Progress Report to keep the study active, or a Final Review of Human Subjects Research form to close the study. In all future correspondence with the Institutional Review Board, please reference the ID# listed above.

Thank you for your cooperation.

Sincerely,

Mara C. Podvey, PhD, OTR
Associate Professor
Co-Chair, Institutional Review Board

Phyllis Hansell, EdD, RN, DNAP, FAAN
Professor
Co-Chair, Institutional Review Board

Office of the Institutional Review Board
Presidents Hall · 400 South Orange Avenue · South Orange, New Jersey 07079 · Tel: 973.275.4654 · Fax 973.275.2978 ·
www.shu.edu
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