

Building Quality Early Childhood Assessment: What Really Matters?

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ANN ELISE BAILEY

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Dedication

“You only grow by coming to the end of something and by beginning something else.”

~John Irving

I dedicate this dissertation to all of the life-long learners in my family. This culture was built and instilled by my grandparents –Herbert H. Bailey, Mary L. Bailey, Lloyd M. Gire, and Norma L. Gire, and modeled and encouraged by my parents, Colin and Linda Bailey, and my siblings—Sarah O’Toole, David Bailey, and Patrick O’Toole. I will be forever grateful and proud to be part of this legacy.

Abstract

This research explored the knowledge, skills, and strategies early childhood teachers possess related to implementing curriculum and authentic assessment. Research suggests that early educators rate their knowledge of curriculum and authentic assessment and their implementation of both as excellent. Despite these self-reported, high levels of knowledge, researchers have established that early childhood authentic assessment is implemented inconsistently and often incorrectly. The purpose of this research was to determine what specific curriculum and authentic assessment skills and strategies have the greatest chance of improving the consistent implementation of early childhood authentic assessment.

Qualitative and quantitative methods were employed to answer two research questions: (1) What curriculum and assessment skills and strategies influence the successful implementation of assessment within an early childhood educational environment; and (2) What components of the assessment cycle (i.e., observation/data collection; data analysis; data interpretation; hypothesis development; modification/implementation of individualized instruction based on the assessment data; reporting) are perceived as having a greater likelihood of improving instruction and outcomes for young children? To answer these questions, interviews were conducted with 13 Head Start lead teachers across three different Head Start programs in Minnesota. Twelve of the teachers interviewed chose to participate in one of three different focus groups. The teachers who participated in the focus groups also completed a 19-item, Likert-scale authentic assessment rating scale on the extent to which they used specific authentic assessment skills.

The interview and focus group data were analyzed using constant comparative analysis, which aided in identifying themes across the data. Sample means were calculated for each of the 19 items on the authentic assessment rating scale. A total of thirteen themes were identified; nine related to research question one, and four related to research question two stated above. The results of the analysis demonstrate that teachers rated their knowledge of curricula and authentic assessment as high, but also reported that their knowledge of early learning and K-12 standards was lacking. Teachers acknowledged that the professional development they receive from their employer had a greater impact on their assessment practices than information they received in their college classes. All teachers mentioned using small groups to implement the curriculum and individualize instruction. Time and competing priorities are reportedly the greatest barriers to implementing authentic assessment with fidelity. The teachers identified on-site coaching, greater sharing among peers, and additional classroom personnel as the supports most desired.

All teachers identified high quality observation as the most important authentic assessment strategy. Teachers differed in the methods by which they collect observational data (e.g., checklists, notebooks, iPads, sticky notes, etc.), but all agreed that observations were the most important. Using the authentic assessment data to individualize instruction was also identified as important to the assessment process. Teachers acknowledged that they rarely, if ever, engaged parents in collecting authentic assessment data. They do, however, regularly share and discuss assessment results. Finally, teachers noted that despite conducting formal authentic assessment three times per school year, they also

conduct informal assessments every day and make “in the moment” instructional decisions based on the information they observe during instruction.

This research adds to the literature by identifying the specific strategies and skills early childhood providers use when conducting authentic assessment. This information can be used to focus professional development efforts, especially for those providers new to the field. Further research is needed on the assessment skills and strategies used by those in other early care and educational environments to expand these findings.

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CHAPTER 1: INTRODUCTION

The educational success of American children has been directly connected to their early educational experiences (preschool and/or childcare) and to how well they are prepared to attend kindergarten (Duncan et al., 2007; La Paro & Pianta, 2000; Marcon, 2002). Yet each year, large numbers of children arrive at kindergarten without the social and/or cognitive skills that are necessary for long-term, academic success (Ackerman & Barnett, 2005; Carlton & Winsler, 1999; Duncan et al., 2007; Ellwein, Walsh, Eads, & Miller, 1991; Epstein, Schweinhart, DeBruin-Parecki & Robin, 2004; Gormley, Phillips, & Gayer, 2008; Graue, 1992; Lincove & Painter, 2006; Magnuson, Ruhm, & Waldfogel, 2007). In April of 2015, the U.S. Department of Education released a report entitled, “A Matter of Equity” that documented significant disparity among preschool programs in the United States and called for major improvements within these programs (U.S. Department of Education [USDOE], 2015). In July 2016, in response to this report, the House Appropriations Committee approved a \$161B budget to support early childhood educational efforts, including funding for childcare, Head Start, Early Head Start, and the Preschool Development Grants (First Five Years Fund, 2016). The intention of these investments in early childhood is to ensure that young children are coming to kindergarten “ready to learn.”

School readiness has been defined in a number of ways. For some, the definition relates solely to the age of the child. For others, it refers to a child’s ability to learn; their knowledge of basic academic concepts (e.g., early numeracy and early literacy); and their ability to follow rules and get along with others (Ackerman & Barnett, 2005; Saluja, Scott-Little, & Clifford, 2000; Scott-Little, Kagan, & Frelow, 2006). Shonkoff and

Phillips (2000) found that young children who are not ready for kindergarten often become teens who are disenchanted with school and more likely to drop out. Other researchers have found that children who are not ready for kindergarten tend to carry those academic and social emotional delays with them throughout their educational experience (Gormley et al., 2008; Magnuson et al., 2007; Saluja et al., 2000; Snow, 2006).

Preschool programs are fundamentally intended to improve school readiness for young children (Gilliam & Zigler, 2004; Schultz, & Kagan, 2006; USDOE, 2015). Early childhood programs receiving federal and state funding, such as Head Start and state-funded preschool, have included the requirement to assess young children as a key accountability component and the method for assessing readiness for school (Early Childhood Learning and Knowledge Center [ECLKC], n.d.; Minnesota Department of Education [MDE], 2016; Mitchell, 2005; USDOE, 2005). Assessing child outcomes and school readiness has become critical in determining the return on investment for these ongoing appropriations for early childhood education.

The measurement of early childhood outcomes is considered the cornerstone of any early childhood program's accountability system (Epstein et al., 2004; Schultz & Kagan, 2006). Measuring early childhood outcomes and readiness for school must be based on agreed-upon standards for young children's learning and development. All 50 states now have early learning standards that outline what early childhood professionals can expect children between the ages of zero to five to know and be able to do in specific domains (e.g., physical development, early literacy, approaches to learning, cognitive development, and social-emotional development) (Bodrova, Leong, & Shore, 2004;

Daily, Burkhauser, & Halle, 2010; National Research Council [NRC], 2008; Scott-Little et al., 2006).

Whereas the assessment of school-aged children typically is used to measure academic performance and progress (Eisner, 1999) or determine eligibility for special education (NRC, 2008), early childhood assessment is intended to measure a young child's progress on five different domains: cognitive, social-emotional, physical development, communication/literacy, and approaches to learning (Daily et al., 2010). The method by which assessments are implemented is also different between early childhood and school-aged systems. School-aged children within the U.S. are typically tested at least once per year, depending on grade-levels, and these tests focus on academic topics such as literacy, math, and science (Abrams, Pedulla, & Madaus, 2003; Clarke, Madaus, Horn, & Ramos, 2000). Early childhood assessment, on the other hand, is intended to be an ongoing process whereby adults who are familiar with the child gather data (e.g., observations, video, work samples, etc.) about the child in the natural environment and while the child is participating in natural routines. This type of assessment has been labeled as "authentic assessment" (Bagnato & Yeh Ho, 2006; Morrison, 2017).

Quality authentic assessment is directly linked to early childhood standards, curriculum, and individualized instruction (Riley-Akers, 2014). Researchers have determined that the process of authentic assessment is cyclical in nature (Bagnato & Yeh Ho, 2006; NRC, 2008). Early educators must collect data; review data for patterns; use data to inform and modify instruction; report the results of the instruction to parents, administrators, and other interested stakeholders; and start the process again to

continually improve instruction and school readiness for young children (Akers et al., 2015c; Bagnato, Neisworth, & Pretti-Frontczak, 2010; NRC, 2001, 2008). Studies of early childhood authentic assessment have shown that early educators typically rate themselves as very knowledgeable when it comes to assessment. These same early educators, however, report wanting greater knowledge of specific assessment tools, the authentic assessment process itself, and concrete ideas on how to implement assessment. Educators report that the cost of assessment tools, the time it takes to implement it correctly, and all of the other responsibilities they have are barriers to implementing assessment (Banerjee & Luckner, 2013; Susman-Stillman, Bailey, & Webb, 2014). Assessing young children with disabilities, children for whom English is a second language, and children who are from culturally and linguistically diverse families has also been identified as challenging by teachers (Banerjee & Luckner, 2013; NRC, 2008; Susman-Stillman et al., 2014).

McNair, Bhargava, Adams, Edgerton and Kypros (2003) reported that teachers of young children find implementing the foundational elements of assessment (e.g., observation, data analysis, using data to inform instruction, and reporting) problematic. Teachers struggled to embed assessment into their daily routines. These same teachers stated feeling knowledgeable about collecting data, but they did not know how to use those data to modify their instruction. Rather, they used the data to meet reporting requirements mandated by the programs for which they work. Researchers also found that early educators struggle to know the purpose of assessment, and many cannot describe the difference between a screening tool and an assessment tool (Banerjee &

Luckner, 2013; Madaus, Rinaldi, Bigaj, & Chafouleas, 2009; NRC, 2008; Susman-Stillman et al., 2014).

Statement of the Problem

This dissertation examined early educators' skills, knowledge, and implementation of authentic assessment within Head Start preschool programming. It also studied teachers' knowledge of, and skills with, implementing curriculum, including individualizing instruction based on authentic assessment data. Given the inconsistency with which early childhood assessment is implemented and the importance of accurately measuring children's readiness for school, the first priority was to describe early educators' knowledge base about curriculum and authentic assessment. This description included determining: (1) what early educators know about early childhood curriculum and authentic assessment; (2) how early educators typically obtain assessment information; (3) what authentic assessment practices early educators currently use, including how they embed them into daily practice; (4) attitudes that early educators have regarding the implementation of early childhood curriculum and assessment; (5) identifying any gaps in curriculum and authentic assessment knowledge; and (6) what early educators perceive as barriers to curriculum and assessment implementation. Next, it was important to determine the early educators' perceptions of what assessment skills and strategies best support the implementation of quality assessment practices. After reviewing more than 170 research articles and reports, Akers et al. (2015a) found a dearth of research on what components of the assessment process are integral to successful implementation, as well as how to best support teachers in using assessment appropriately to improve child outcomes. "We lack rigorous evidence about the key steps

in the assessment and tailoring process that make ongoing assessment most effective at improving instructional quality or child outcomes” (Akers et al., 2015a, p. 3). The intent of this research was to gather evidence that would describe and define those critical curricular and authentic assessment components and strategies to further guide early educators.

Theoretical Framework

This research used the work of Glaser and Strauss (1967) and Charmaz (2014) on grounded theory as its foundation. Grounded theory is defined as “the systematic generation of theory from data acquired by a rigorous research method” (Glaser, 1998, p. 3). Glaser and Strauss (1967) posited that it is more appropriate to develop a theory based on data and then to modify that theory with additional data than it is to try to force a theory to fit a situation. As new data are gathered, the researcher compares the data to the existing theory for fit and relevance and adjusts the theory accordingly. Grounded theory was most appropriate for this research, due to the lack of an evidence base in the area of teacher practices, including individualized instruction, within early childhood assessment.

Constructivist grounded theory posits that researchers begin their work by collecting data within the environment in which they are interested. These data may take many forms, including observations, interviews, focus groups, and others. Collected data guide the researcher to the next set of questions. As data are gathered, researchers take notes about potential labels for the themes they identify, which are refined as more data are available and analyzed. The researchers then use the data to begin to build a theory and refine that theory based on the additional data (Charmaz, 2014).

For a grounded theory to be applicable, it must meet four criteria: fit (i.e., the data are representative); understanding (i.e., data are easy to comprehend); generality (i.e., data can be applied to more than one situation); and control (i.e., data has boundaries) (Glaser & Strauss, 1967). It is also the responsibility of the grounded theory researcher to be open-minded and creative enough to recognize and develop alternative explanations based on the data (Strauss & Corbin, 1990). Charmaz (2014) advocated, as part of her “constructivist grounded theory” perspective that the researcher should also analyze and acknowledge how his/her experiences may impact the research questions asked, the data collected, and the results discovered.

Glaser (1998) stated that the role of grounded research was to develop and define the “basic core category” (p. 36), which is the overall description of what is occurring in the field. Early childhood authentic assessment literature currently contains no “basic core category” of actual teacher practices. It was the intent of this research to develop and define that basic core category for the implementation of early childhood authentic assessment.

Purpose of the Study and Research Questions

The purpose of this research was to determine what skills and strategies have the greatest chance of positively influencing early childhood instructional and authentic assessment practices. Defining the parts of an early childhood assessment system with the aim of determining their individual importance related to implementation was imperative to this research. Data were gathered on early educators’ perceived curriculum and authentic assessment knowledge and implementation skills, with the intent of determining the parts of the early childhood assessment process that may have the

greatest impact on implementation rather than looking at the assessment system as a whole. Previous research on early childhood assessment has focused mainly on early educators' attitudes and beliefs about assessment and the professional development they receive (Banerjee & Luckner, 2013; Pretti-Frontczak, Kowalski, & Brown, 2002; Schappe, 2006). Akers et al. (2015c) noted that there has been little research done on early childhood teachers' use of ongoing assessment or the specific skill set(s) teachers need to implement assessment with fidelity. There is a great need to know what individual teachers reportedly do regarding early childhood assessment.

The research was guided by the following research questions:

1. *What teacher knowledge, skills, and strategies reportedly influence the successful implementation of curricula and authentic assessments within an early childhood educational environment?*
2. *What components of the assessment cycle (i.e., observation/data collection; data analysis; data interpretation; hypothesis development; modification/implementation of individualized instruction based on the assessment data; reporting) do teachers perceive as having a greater likelihood of improving instruction and outcomes for young children?*

Significance of the Study

Current research focuses on the assessment practices of groups of teachers, but Akers et al. (2015c) suggested that it is important to have more research that focuses on individual early educator assessment implementation behaviors. They argued that it is critical to conduct research on the integral components of ongoing assessment so that

early childhood leaders can truly understand how to best support early childhood professionals around assessment.

Additional research should systematically examine the steps of high-quality ongoing assessment and individualization. This will require careful study of what is needed to implement the steps that are critical for improving instructional practice and for attaining more positive child outcomes. (Akers et al., 2015c, p. 2)

The results of this research are intended to further what is currently known about individual teachers' assessment practices, what strategies best support the implementation of assessment, and what attitudes and behaviors make implementation difficult. This information can be used to enhance professional development opportunities available to early childhood educators; guide those who provide professional development opportunities to early educators (e.g., university, college, and community college faculty, Head Start trainers, trainers from Think Small and Child Care Aware programs, etc.); and enhance individual educators' knowledge and skills around early childhood assessment.

Definition of Terms

The following definitions are germane to the proposed research:

- *Authentic Assessment* is defined as “the systematic recording of developmental observations over time about the naturally occurring behaviors and functional competencies of young children in daily routines by familiar and knowledgeable caregivers in the child’s life” (Bagnato & Yeh Ho, 2006, p. 29). Morrison (2017) posits that authentic assessment also must include assessing children on the basis of their actual work; providing ongoing assessment throughout the year; embedding assessment into curricula; using a cooperative and collaborative process; using information to help professionals and parents learn more about children’s development; assessing what individual children can do; and making assessment part of the learning process (p. 166).
- *Curriculum* is defined as: a “broad range of content across disciplines that is socially relevant, intellectually engaging, and personally meaningful to children”

(Bredekamp & Copple, 1997, p. 20). The content is typically organized around the following developmental domains: physical development, early literacy, approaches to learning, cognitive development, and social-emotional development) (Daily et al., 2014; Scott-Little et al., 2006; NRC, 2008)

- *Early Educators* are defined as: “any professional working in Early Learning and Development Programs, including but not limited to center-based and family child care providers, infant and toddler specialists, early intervention specialists and early childhood special educators, home visitors, related service providers, administrators, Head Start teachers, Early Head Start teachers, preschool and other teachers, teacher assistants, family service staff, and health coordinators” (U.S. Department of Education, 2011, Definitions, para. 4).
- *Professional Development*: Researchers and early childhood organizations have developed several definitions for what constitutes early childhood professional development. The National Professional Development Center on Inclusion proposes the following definition: “professional development is facilitated teaching and learning experiences that are transactional and designed to support the acquisition of professional knowledge, skills, and dispositions as well as the application of this knowledge in practice” (Buysse, Winton, & Rous, 2009, p. 239). Other definitions all include similar components that include building the skills and knowledge as well as changing the attitudes of early educators—both in preparation for becoming an educator (i.e., pre-service) and within the actual practice of being an educator (i.e., in-service) (Maxwell, Feild, & Clifford, 2006; NAEYC, n.d.; Sheridan, Edwards, Marvin, & Knoche, 2009).

Overview of Dissertation

In Chapter Two, research is reviewed on the multiple problems within the realm of early childhood assessment. There is a large body of research that demonstrates children are not coming to school ready to learn. Although research does support the use of assessment to support child development, there is little research on what early childhood educators know and believe about early childhood assessment. Finally, no research exists on the specific knowledge and skills that early educators must possess in order to implement early childhood authentic assessment with fidelity. The National Research Council (2001) states, “A vision for the future is that assessments at all levels—from classroom to state—will work together in a system that is comprehensive, coherent,

and continuous. In such a system, assessments would provide a variety of evidence to support educational decision making” (p. 9). It was my intent to add to the literature and evidence base so that early childhood authentic assessment professional development opportunities align succinctly with the skills early educators need to implement assessment effectively and consistently.

Chapter Three describes the methods used to gather and analyze data. Qualitative methods, specifically interviews and focus groups, were chosen because of the highly descriptive, detailed, and dynamic nature typical of these methods (Corbin & Strauss, 2008). Teachers were also asked to complete a 19-item authentic assessment rating scale on the extent to which they use specific assessment skills in their practice. The process by which lead Head Start teachers were selected to participate is described, as is demographic information on these teachers. Descriptions of both the interview and focus group protocols are shared. Qualitative data were analyzed using NVivo software package (Version 11), which allows researchers to classify qualitative data into themes and sub-themes (Bazeley, 2007). The data were also analyzed using the constant comparative method described by Glaser and Strauss (1998), which compares new data to existing data and measures the goodness-of-fit. The quantitative data were analyzed using MS-Excel.

Chapter Four provides the results of the research, including the major themes and subordinate themes discovered through data analysis. Chapter Five discusses the results outlined in the previous chapter and the contributions this study may have to the existing, early childhood authentic assessment research base. Implications for early childhood

assessment policy and future research are discussed, as are the limitations of this research.

CHAPTER 2: REVIEW OF THE LITERATURE

This review of the literature includes an examination of school readiness and how early childhood programming plays a key role in getting children ready for school. An overview of the history of early childhood assessment, as a critical component to measuring children's readiness for school, is also included, as are policies that have affected its implementation and its impact on young children's educational outcomes. An overview of early childhood authentic assessment, its purpose within early childhood programming, how it differs from typical, school-aged assessment, and why it is appropriate for children ages birth to five are also discussed. Recommended practices related to implementing authentic assessment within early childhood programs are presented, and the evidence base that suggests early childhood teachers are inconsistent with their assessment practices is reviewed. Professional development opportunities for early educators who implement authentic assessment and the influence of teacher quality on child outcomes are explored. Finally, the literature review includes an overview of grounded theory and why it is most appropriate for this research.

School Readiness

Young children's readiness for school has been by far the most researched topic within early childhood education (DiBello & Neuharth-Pritchett, 2008; Downs & Strand, 2006; Epstein et al., 2004; Maxwell et al., 2006; NRC, 2008; Shepard, Kagan, & Wurtz, 1998; Snow, 2006). Each year, large numbers of children arrive at kindergarten without

the social and/or cognitive skills that are necessary for long-term, academic success (Ackerman & Barnett, 2005; Carlton & Winsler, 1999; Duncan et al., 2007; Ellwein et al., 1991; Epstein et al., 2004; Gormley et al., 2008; Graue, 1992; Lincove & Painter, 2006; Magnuson et al., 2007). The educational success of American children has been connected to their early educational experiences (preschool and/or childcare) as well as how well they are prepared to attend kindergarten (Duncan et al., 2007, La Paro & Pianta, 2000; Marcon, 2002).

Historically, readiness for school often referred to a child's age rather than their cognitive abilities to learn (Ackerman & Barnett, 2005; Saluja et al., 2000; Scott-Little et al., 2006). The National Education Goals Panel (1998) suggested that school readiness be measured by children's approaches to learning, language/literacy and math skills, and also by their physical development, general cognitive, and social emotional skills. Although many other researchers have agreed with this definition, it has also been widely recognized that the exact way to measure these skills and knowledge is elusive (Doherty, 1997; Parker, Boak, Griffin, Ripple, & Peay, 1999; Saluja et al., 2000; Scott-Little et al., 2006; Shepard et al., 1998; Thompson & Happold, 2002;). Children have been identified as not ready for kindergarten based on relatively minor delays in academic, language, and math skills and behavioral issues to more severe developmental delays. Children have also been identified as not ready for kindergarten based on race, poverty-status, gender, and age (Ellwein et al., 1991; Foulks & Morrow, 1989; Walsh, Ellwein, Eads, & Miller, 1991). Often, the children who are ill-prepared to attend kindergarten are also the students who become disillusioned and disengaged throughout their school experience (Shonkoff & Phillips, 2000). Multiple studies have demonstrated that children who do not

have the developmentally-appropriate academic skills (i.e., literacy and math) and social skills at kindergarten continue to demonstrate delay in later years (Gormley et al., 2008; Magnuson et al., 2007; Saluja et al., 2000; Snow, 2006)

Carlton and Winsler (1999) and Kagan (1990) both suggested that school readiness be broken into two, distinct parts: readiness for learning, and readiness for school. Both concepts—being ready to learn and ready for school—imply that multiple skills and facets of behavior must be present in a child for that child to succeed in school. Snow (2006) suggested that school readiness be viewed as a continuum and that the measurement of readiness be nimble, age-appropriate, and sensitive to small changes over time. Ackerman and Barnett (2005) stated that without a common definition of school readiness, what is expected of children and their knowledge/skills will continue to fluctuate between parents and teachers/schools.

Measuring children's readiness for school is also highly variable from state to state. Saluja et al. (2000) found that thirteen states require statewide screenings or assessments to determine readiness; approximately half of the 50 states have no mandate at the state-level, but allow school districts to determine readiness if they choose to do so; and six states have no requirements for measuring readiness at all. The way in which these data are used also varies across states. Some states use the data to inform kindergarten instructional practices, others use the data to identify which local districts need extra support, others use the data to screen for disabilities or other special needs, and others let the districts decide how they intend to use the data. In their study, only eight states reported actually collecting data at the state level (Saluja et al., 2000). In 2005, 17 states began to collaborate on developing school readiness indicators that would

help policy makers support school readiness, as well as track children from birth to age eight in order to improve child outcomes (Getting Ready, 2005). The collaboration defined readiness in terms of a “readiness child equation,” which defined readiness for families, communities, services, and schools (p. 12). Because school readiness is a predictor of later academic success (Ackerman & Barnett, 2005; Duncan et al., 2006), state and local policies must be in place to support teachers, families, and children with being ready for school.

Early educators and parents often report differing perspectives when it comes to defining school readiness. When asked what they thought was important for children to be ready for school, early childhood educators and kindergarten teachers most often reported prosocial skills—behaviors that help children get along in society, such as following rules, being able to communicate their own needs, curiosity, and being responsive to teacher requests—as being more important than knowing their numbers and letters (Ackerman & Barnett, 2005; Foulks & Morrow, 1989; Lin, Lawrence, & Gorrell, 2003; Rimm-Kaufman, Pianta, & Cox, 2000; Snow, 2006). Parents, especially those parents who live in poverty and those who are English Language Learners, most often reported that knowing letters and numbers is the most important aspect of school readiness (Ackerman & Barnett, 2005; Piotrkowski, Botsko, & Matthews, 2001). Teachers’ beliefs about what skills are important for school are also connected to their beliefs about how children learn. Smith and Shepard (1988) found that teachers varied in their beliefs about the development of skills needed to be ready for school. There was a continuum of beliefs ranging from pure nativism (i.e., children are born with their abilities to learn) and pure environmentalism (i.e., people and places can influence and

change a child's ability to learn and be ready for school). Those educators who had nativist perspectives were more likely to retain children than were those who reported having an environmentalist perspective.

Although there is no one, agreed-upon definition of school readiness, researchers can agree that it is difficult to assess readiness. The difficulty arises because young children grow and change rapidly at different paces, their rates of growth and development are dependent on the environment(s) in which they spend the majority of their time, and typical, school-aged assessments are not developmentally appropriate for young children (Kagan, 1990; Meisels, 1998; NRC, 2008; Saluja et al., 2000).

Preschool as a Means to Improve School Readiness

In response to the need to improve children's readiness for school, various early care and education programs have been implemented within the United States. The most common options for preschoolers are family-based childcare, center-based childcare, public and private preschools, and/or the federally-funded Head Start program. Research on these early childhood programs demonstrates mixed results for children who participate in them. In the often-cited research from Tennessee's STAR, Abecedarian, and Perry Preschool programs, children demonstrated long-term improvement in cognitive skills and academic outcomes (Barnett, 1995, Borman & Hewes, 2002; Nye, Hedges, & Konstantopoulos, 1999; Ramey & Campbell, 1991; Schweinhart et al., 2005). In a review of other, large-scale early childhood preschool programs (e.g., Head Start, state- and city-run preschools) and their effects on student outcomes, Barnett (1995) found that the majority of programs had a significant impact on children's cognitive development and social skill development. Most students, regardless of race/ethnicity or

socio-economic background, show increases in literacy, language, and math skills immediately after attending preschool programs (Anderson et al., 2003; Barnett, 1995; Gilliam & Zigler, 2004; Gormley, & Phillips, 2005; Magnuson et al., 2007).

For the majority of these programs, including childcare, federally-funded Head Start, family-based childcare, and others, these academic and behavioral improvements tend to be short-lived. Research on the Head Start program shows that all children participating in the program make short-term academic gains that typically decline by third grade (Currie & Thomas, 1993; Lee, Brooks-Gunn, Schnur & Liaw, 1990; Lee & Loeb, 1995; U.S. Department of Health and Human Services, Administration for Children and Families [USDHHS/ACF], 2010). Most children who initially benefit from attending any preschool programs see those same cognitive and socialization improvements disappear by first or second grade (Lee et al., 1990; Lee & Loeb, 1995; Magnuson et al., 2007; McKey, Condelli, Ganson, Barrett, McConkey & Plantz, 1985). Longitudinal research, however, has demonstrated that children who participated in at least one or two years of preschool education were more likely to graduate from high school and were less likely to be arrested or be involved in special education (Anderson et al., 2003; Barnett, 1995; Reynolds, Temple, Roberston, & Mann, 2001; Schweinhart et al., 2005).

Even in the presence of these data, the most often suggested way to improve school readiness is to provide quality preschool education. In 2014, the U.S. Department of Education announced a national competition for Preschool Development Grants. Eighteen states received grants totaling more than \$225 million (USDOE, 2014a). These grants are intended to help states “(1) build or enhance a preschool program infrastructure

that would enable the delivery of high-quality preschool services to children, and (2) expand high-quality preschool programs in targeted communities that would serve as models for expanding preschool to all 4-year-olds from low- and moderate-income families” (USDOE, 2014a, para 1). In his 2012 State of the Union Address, President Obama supported federal funding for quality, universal preschool for all 4-year olds (State of the Union Address, 2012). Similarly, Presidents G. W. Bush’s and Clinton’s educational policy agendas included a focus on early childhood education, including increases in funding at the federal level (U.S. Department of Agriculture, 2009). To date, approximately 1.3 million children have attended state-funded preschool programs in one of the 40 states that offer those programs (Barnett, Carolan, Squires, & Brown, 2013). Although deemed a “priority” at the federal level, the National Institute for Early Education Research (NIEER, 2013) reported that for the first time in more than 10 years, the number of state-funded preschool slots declined and that funding for state-funded preschool has declined in 20 states. Out of the 40 states and District of Columbia, only fifteen states provided enough per child preschool funding to meet standards for quality (Barnett et al., 2013). In studies by Karoly et al. (2008) and Zellman and Perlman (2008), there is evidence that not only is there a lack of quality preschool education opportunities, but that those children who need it most (i.e., children from disadvantaged communities) are the least likely to gain entry into high quality programs.

Providing preschool programming alone, however, does not make for long-term improvement on child outcomes. The quality of these programs matters. One reason why preschool programs continue to show mixed results related to student outcomes may be that assessing the quality of preschool programming is a relatively new practice.

History of Early Childhood Assessment Policy

A major push for measuring children's readiness for school initially came following the deliberations of the first National Education Goals Panel by President George H. W. Bush and the nation's governors in 1990 (Meisels, 1998; Shepard et al., 1998). In 1994, Congress enacted the Goals 2000: Educate America Act requiring a method for measuring children's status and progress towards being ready for school, thus developing the need for early childhood assessment (Meisels, 1998; Shepard et al., 1998). Head Start also led accountability efforts by including early care environmental assessment in the 1994 reauthorization and authentic assessment of children/ measurement of child outcomes in its 1998 reauthorization (ELCKC, n.d.; NRC, 2008). The 2007 reauthorization of Head Start specifically mentions that all screening and child assessment tools be reliable, valid, developmentally appropriate, and culturally and linguistically sensitive (Halle, Zaslow, Wessel, Moodie, & Darling-Churchill, 2011).

Other early childhood programming, such as early childhood special education, early intervention, and center-based childcare systems, quickly followed Head Start's lead in implementing authentic assessment. The 2004 authorization of the Individuals with Disabilities Education Act included requirements for states to measure child outcomes for all infants, toddlers, and children under five with disabilities (USDOE, 2005). Since 2005, states are required to collect outcome data on "positive social-emotional skills (including social relationships); acquisition and use of knowledge and skills (including early language/communication and early literacy); and use of appropriate behaviors to meet their needs" (p. 6) for all children who meet IDEA eligibility requirements (USDOE, 2014b, 2014c).

Family childcare programs that choose to enroll in their states' Quality Rating and Improvement Systems (QRIS) are required to assess both the program and the children within the program (Mitchell, 2005; Schaack, Tarrant, Boller, & Tout, 2012). The U.S. Department of Health and Human Services, which oversees Head Start, Early Head Start, and federal childcare programs, instituted the QRIS starting in the 1990s (Schaack et al., 2012). As of 2012, there were 41 states who reported having instituted QRIS. The QRIS in each state varies greatly and is often focused more on childcare programs than school-based or preschool programs (Mitchell, 2012).

As part of the increasing investment in early childhood educational programming, assessing the skills and knowledge of young children and using that information to inform instructional practices have been an integral part of early education for roughly the past quarter century (Meisels & Atkins-Burnett, 2000). To accurately measure what children can and cannot do, as well as determine their readiness for school, there must be a definition of age- and developmentally-appropriate skills and knowledge adults can expect from young children. Starting in the early 1990s, early learning standards were developed to support early childhood professionals' knowledge of child development, as well as guide school readiness policies and practices within each state (Bodrova et al., 2004; Daily et al., 2010; Scott-Little et al., 2006; NRC, 2008). Early learning standards describe what typically developing children know and can do from birth to age five within the domains of social emotional development, language and literacy, physical development, math, science, and approaches to learning (Daily et al., 2010). These early learning standards have been developed and implemented to increase understanding of child development in all domains; recommend strategies for early education providers

that will assist them in supporting children’s optimal development; support families by providing information and strategies that facilitate and enhance children's development; provide early childhood professionals in all roles and environments with a “common conceptual framework and guidelines for planning curriculum, instruction, and assessment of young children” (MDE, 2005, p. 1), and inform policy makers about typical children’s development in order to measure impact of programming, services, and allocated resources (Daily et al., 2014; MDE, 2005; NRC, 2008). As of 2010, all states and Washington, D.C. have preschool standards in place and more than half of the states have birth-to-three early learning standards (Daily et al., 2010).

Once standards were developed, screening and assessment tools were developed and promoted within early care and education environments. Federal education policies such as No Child Left Behind and Good Start Grow Smart required the use of assessment as a method for determining quality and effectiveness in early childhood and K-12 education (NRC, 2008; Sheridan et al., 2009). These educational initiatives spurred a specific focus on early childhood assessment as a means of accountability. As more federal, state, and local monies were used to fund early care and education programs, funders wanted some way to know that their investment demonstrated positive returns (Bagnato & Yeh Ho, 2006; Downs & Strand, 2006; Epstein et al., 2004; NRC, 2008; Neisworth & Bagnato, 2004; Schilder & Carolan, 2014). As researchers and practitioners began to learn more about how early childhood assessment can be used in the field, the reason for conducting early childhood assessment moved away from accountability efforts using norm-referenced tools and moved towards using curriculum-based, “authentic” assessment to improve instructional practices and improve outcomes for

children participating in these programs (NRC, 2008; Schilder & Carolan, 2014; Vanderheyden, 2005).

Authentic Assessment and Curriculum

Early childhood assessment has consistently been promoted as the best method to establish whether young children (ages birth through five years) are meeting developmental milestones and outcomes (Bagnato et al., 2010; McLean, Wolery, & Bailey, 2004; National Association for the Education of Young Children & National Association of Early Childhood Specialists in State Departments of Education [NAEYC & NECS-SDE], 2003; National Educational Goals Panel, 1998; NRC, 2001, 2008; Schultz & Kagan, 2006). Early attempts at assessing young children, however, followed what had been done for older, school-aged children. Norm-referenced assessment tools were used to make education decisions for young children, despite the fact that these norm-referenced tools were rarely developed for children under five years old (Bagnato et al., 2010; Bagnato & Yeh Ho, 2006; Neisworth & Bagnato, 2004). Using a one-time test score to determine a young child's attitude and aptitude for learning led to the undermining of children's esteem and motivation for learning (Bagnato & Yeh Ho, 2006). Young children being removed from their natural environments to be assessed, often by professionals with whom they were unfamiliar, often led to inaccurate results (Neisworth & Bagnato, 2004).

Rather than direct assessment of children, researchers advocated using ongoing or "authentic" assessment to measure outcomes. Bagnato and Yeh Ho (2006) defined authentic assessment as "the systematic recording of developmental observations over time about the naturally occurring behaviors and functional competencies of young

children in daily routines by familiar and knowledgeable caregivers in the child's life" (p. 29). Morrison (2017) posited that authentic assessment also must include assessing children on the basis of their actual work; providing ongoing assessment throughout the year; embedding assessment into curricula; using a cooperative and collaborative process; using information to help professionals and parents learn more about children's development; assessing what individual children can do; and making assessment part of the learning process. "Some people think of assessment as an end point--something you do to prepare a report for families or to meet a program's requirements. Actually, assessment should be used as an ongoing process to answer questions about children's growth and learning, and to find ways of supporting their development (Jablon & Dombro, 1999, p. 1).

This type of ongoing or "authentic" assessment has multiple purposes: 1) it is a means by which early care and education programs can determine the academic and behavioral strengths and needs for improvement of not only children, but also of the program itself; 2) it is a way to inform instruction and caregiving so that children can meet or exceed developmental milestones; and 3) it is the primary method for responding to accountability requirements of organizations that fund early childhood educational initiatives (Banerjee & Luckner, 2013; NRC, 2008; Schultz & Kagan, 2006; Shepard et al, 1998). Bagnato, McLean, Macy, and Neisworth (2011) identified "tailored" instruction as the most salient part of authentic assessment—the chance to collect individual data and use the data to modify and adapt instructional practices for that individual in hopes of improving outcomes and readiness for school. They also argued that early childhood assessments, curricula, and instructional practices must focus on

functional skills (e.g., group entry, getting along with other children, problem-solving, etc.) as well as academic skills (e.g., counting and early literacy) for children.

“Instructional objectives that are most likely to promote a child’s increased competency and successful inclusion in typical environments are socially valued, functional, strength based, universal and generalizable” (p. 247). Meisels and Atkins-Burnett (2000) highlighted the “social utility” of authentic assessment—the planning, intervention, and evaluation of those interventions to improve outcomes for young children—as the most influential aspect of assessing young children. “Ideally, any assessment activity benefits children by providing information that can be used to inform their caregivers and teachers, to improve the quality of their care and educational environments, and to identify child risk factors that can be remedied” (NRC, 2008, p. 3).

Early Childhood Assessment Systems and Policies

Ongoing assessment of both children and the program itself is considered to be fundamental to any state early childhood accountability and improvement system (Epstein et al., 2004; Schultz & Kagan, 2006). The past 15 years have seen an increased focus on building quality early childhood systems that include well-defined, systematic early childhood assessment components (Grisham-Brown, Hallam, & Brookshire, 2006). This increased focus is evidenced by federal programs such as Head Start, Childcare, and Early Childhood Special Education all requiring grantees to assess children in order to report child outcomes (ELCKC, n.d.; Mitchell, 2005; USDOE, 2005). As part of the Race to the Top: Early Learning Challenge funding, many states have been working to develop or enhance their comprehensive assessment system for young children (USDOE & U.S.

Department of Health and Human Services, 2013). The federal government defines a comprehensive assessment system as

. . . a coordinated and comprehensive system of multiple assessments—each of which is valid and reliable for its specified purpose and for the population with which it will be used—that organizes information about the process and context of young children’s learning and development in order to help early childhood educators make informed instructional and programmatic decisions. A comprehensive assessment system includes, at a minimum, screening measures, formative assessments, measures of environmental quality, and measures of quality adult-child interactions. (USDOE, 2011, para. 2)

The NAEYC and the NAECS/SDE (2003) posited that in order for any early childhood program to be considered of quality, there must be a clear, well-defined and “. . . inter-connected system of curriculum, child assessment and program evaluation” (p. 1). The joint position statement of these two organizations states that the system must be built upon early childhood learning standards (e.g., Minnesota Early Childhood Indicators of Progress) and must align with what we know to be the best practices in early childhood education. Specific to assessment, these organizations recommend that:

To assess young children’s strength, progress, and needs, use assessment methods that are developmentally appropriate, culturally and linguistically responsive, tied to children’s daily activities, supported by professional development, inclusive of families, and connected to specific, beneficial purposes: (1) making sound decisions about teaching and learning, (2) identifying significant concerns that may require focused intervention for individual children, and (3) helping programs improve their education and developmental interventions. (p. 2)

Building a quality early childhood assessment system that includes these defined elements is dependent on a “well-articulated set of standards for both program quality and children’s learning” (NRC, 2008, p. 305), the quality of the early educators providing services to children (Buysse & Hollingsworth, 2009; Peisner-Feinberg et al., 2001), high-quality, accessible, comprehensive professional development available to the early

educators, (Bagnato et al., 2010; Buysse & Hollingsworth, 2009, NRC, 2008), as well as evaluation of the system (NRC, 2008).

Authentic Assessment Process

The process of authentic assessment has been depicted in a number of different ways (see Figure 1) by different preschool programs (e.g., Head Start), different early childhood assessment tools (e.g., TS-Gold™), and researchers (e.g., Akers et al., 2015b).

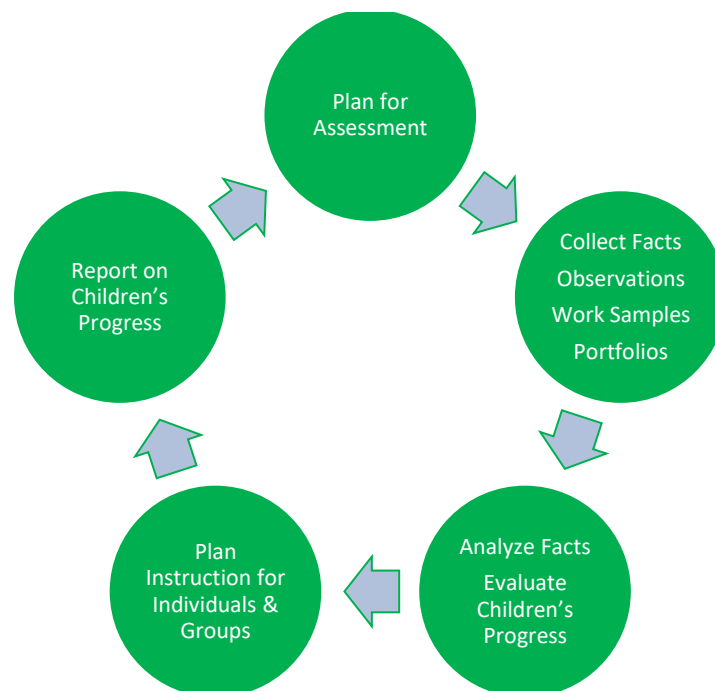


Figure 1. Typical authentic assessment cycle components (Gazith, 2014)

No matter the source, typical early childhood ongoing assessment processes include the following components: 1) a gathering of data/information, which may take the form of observations, direct assessment, checklists, running records, anecdotal notes, video, work samples/portfolios, time sampling, frequency counts, and any other parent and caregiver input; 2) analysis and interpretation of those data, focusing on patterns and

trends of behavior and comparing that information to what is developmentally and age-appropriate; 3) using these data and the hypotheses developed from the data to implement and eventually modify individualized, developmentally-appropriate instruction to improve child outcomes; and 4) sharing those data and the results of the individualized instruction with parents and other identified stakeholders (Akers et al., 2015c; Bagnato et al., 2010; Bredekamp & Copple, 1997; McLean et al., 2004; Morrison, G., 2017; NRC, 2008; Neisworth, & Bagnato, 2004; Sandall, McLean, & Smith, 2000). When implemented correctly, early childhood assessment has the potential to support children's development and prepare them to meet future education goals (Bagnato et al., 2010; NRC, 2008; Grisham-Brown et al., 2006; Schultz & Kagan, 2006; Sheperd, 1994). Riley-Ayers (2014) stated that early childhood assessment is more than simply using an assessment tool repeatedly and consistently. "Formative assessment is a process, which includes a feedback loop to assist children in closing the gap between current status and desired outcomes, milestones, or goals" (p. 6).

Professional Development on Authentic Assessment and Curriculum

Early childhood education assessment policies alone do not improve child outcomes. Improving child outcomes is dependent on the quality of the early education workforce and the quality of the professional development available to educators. State and local programs are responsible for determining where, when, and how professional development is provided. Professional development has been proposed as the best method for sharing information with early educators regarding authentic assessment (Banerjee & Luckner, 2013; Buysse & Hollingsworth, 2009; Sheridan et al., 2009). There is, however, no professional consensus on what constitutes or defines early childhood

professional development. In a review of early childhood literature, Maxwell et al. (2006) identified three consistently-recognized elements within early childhood professional development: education, training, and credentialing. More specifically, education refers to a more formal process of knowledge acquisition that early educators gain through participation in college coursework and their degree attainment (e.g., high school, associate's degree, bachelor's degree, etc.). Training, on the other hand, most often refers to the more informal information sharing opportunities that early educators attend, including workshops, on-the-job learning opportunities, and conference presentations. Credentials specify learning standards expected of early educators. While the authors recognize that there are credentials, licenses, and certificates that early educators may hold, they also note that these credentials are inconsistent across employment types within early childhood education (Maxwell et al., 2006).

The National Association for the Education of Young Children (NAEYC) (n.d.) defines professional development as “initial preparation (preservice) and learning experiences (in-service) designed to improve the knowledge, skills/behaviors, and attitudes/values of the early childhood workforce (p. 1). They recommend that early childhood professional development be developed as a system that is continuous and based upon research. The organization advocates that any quality professional development system include information regarding the following program standards: relationships, curriculum, teaching, and assessment of child progress, health, teachers, families, community relationships, physical environment, and leadership/management (NAEYC, 2005).

Hyson and Whittaker (2012) state that a quality early childhood professional development system contains six integral components: core knowledge/standards, access, recognition (i.e., credentials, incentives, and pay), quality assurance, governance and financing, and evaluation. They note that even with federal early childhood policies in place for all early education programs, professional development systems have remained in sector silos, tend to focus on center-based preschool classrooms, and have not collaborated well with institutes of higher education for credit-based offerings.

Buysse et al. (2009) and Maxwell et al. (2006) both cite the lack of a common professional development definition as the reason why professional development is not more organized across early childhood education sectors (e.g., family childcare, center-based childcare, Head Start, school-based early childhood programs), why there are no common professional competencies across early childhood sectors, and why the professional development that is offered is often disjointed and significantly different depending where the information is offered and by whom. The authors propose a both a definition and a conceptual framework that includes the who (i.e., a description of the learners and what they need), what (i.e., the content and how it is applied), and how (i.e., through what methods information is shared and supported across time) of professional development. Without a common definition, it is difficult to research the relationship between the quality of the professional development and how it may relate to improvement in teacher quality and better outcomes for children (Buysse et al., 2009; Sheridan et al., 2009).

Research on the details of early childhood educators' college coursework, pre-service, and in-service professional development opportunities is negligible (Early et al.,

2007; Early & Winton, 2001; Sheridan et al., 2009). Shimmel, Hauser, and Martin (2014) recently conducted an online review of state policies and opportunities for professional development on the topic of early childhood assessment. For the states reviewed ($n = 8$), much of the available professional development is directly tied to the chosen assessment tool (e.g., Teaching Strategies Gold [TS-Gold], Desired Results Developmental Profile (DRDP), High Scope COR, etc.) and is available in-person and online. It is not clear, however, how often these trainings are provided for early educators and who is responsible for the cost of attendance. A scan of available early childhood assessment coursework offered by statewide early childhood training agencies and institutes of higher education in Minnesota, including community colleges and four-year colleges and universities, showed a plethora of courses on observation and a paucity of courses on analysis of assessment data and using assessment data to inform instructional practices (Susman-Stillman et al., 2014). Schön (1987) points out that when preparing teachers for employment, those within the institutes of higher education assume that research, even research of high quality, is easily translated into professional knowledge and use. This assumption is a common fallacy of quality early childhood education—that available professional development and educated caregivers automatically leads to better child outcomes. Ramey and Ramey (2006) assert that all measures of quality must be observable in the behavior of both the educator and the children with whom they work.

In one of the most recent studies directly related to authentic assessment professional development, Banerjee and Luckner (2013) directly asked early childhood professionals across the country about what type of assessment training they needed. They found that, when presented with a list of 16 topics, early childhood professionals

most wanted training on how to assess children from linguistically and culturally diverse backgrounds, how to share information with families from linguistically and culturally diverse backgrounds, and general information on how to assess children. Early educators also identified wanting “hands on” training in both formal and informal settings, more information on how to choose valid and reliable assessment tools; how to work collaboratively with interdisciplinary teams; and a better foundational knowledge of both typical and atypical child development. Educators also specified how they want this professional development offered to them. Educators reported wanting face-to-face coaching and mentoring, the ability to observe seasoned educators conducting assessment, and professional development that includes concrete examples of how to effectively implement ongoing assessment (Banerjee & Luckner, 2013; Susman-Stillman et al., 2014). Both of these studies found that early childhood professionals simply wanted more training on all aspects of assessment.

When asked about their own skills with and knowledge of early childhood assessment, early educators generally rate themselves as “knowledgeable” or “very knowledgeable” on all aspects of early childhood assessment. Early educators report that they are knowledgeable about assessment tools, appropriate uses of assessment tools including progress monitoring, collaborating with families and sharing assessment results with them, and using assessment data to inform their instructional practices (Banerjee & Luckner, 2013; Susman-Stillman et al., 2014). Unlike Banerjee and Luckner (2013), Susman-Stillman et al. (2014) found that that early educators were less confident conducting authentic assessment with and making modifications for children who have disabilities and children who are English Language Learners.

Multiple studies recognize that even with available professional development on assessment, knowledge of the topic does not necessarily transfer to behavioral change on the part of early educators and improved outcomes for young children (Guskey, 2002; Fullan & Miles, 1992; McNair et al., 2003). Guskey (2002) found that teachers specifically want practical, relevant, concrete, and useful information to help inform their practice. McNair et al. (2003) state, “Despite the fact that principles of and strategies for assessment are taught in most teacher education programs. . . teachers do not demonstrate a clear understanding of how to use assessment to support the teaching and learning process in the classroom” (p. 28).

Teacher Quality

Quality teachers are critical to the success of early care and education programs and to the long-term success of children (Kagan, Kauerz, & Tarrant, 2008; LoCasale-Crouch et al., 2007). Recent federal early childhood policies, such as Head Start and Good Start Grow Smart, have included mandates for increasing teacher qualifications and providing more opportunities for training and technical assistance to childcare providers as part of their goal of improving school readiness (Tout, Zaslow, & Berry, 2005). Unfortunately, there have also been obstacles to developing and sustaining a qualified early childhood workforce. Early educator qualifications vary greatly from state to state and from program to program (Bellm & Whitebook, 2006; Early et al., 2007; NAEYC, 2008). A study by the National Survey of Early Care and Education Project Team (NSECE, 2013) found that about half of the sample of center-based early educators has some sort of college degree, but only a quarter of the sample had bachelor’s degrees. Those providers who worked in school-based environments were more likely to have at

least a bachelor's degree. The majority of home-based providers in their study had a high school education or less. In their sample, Susman-Stillman et al. (2014) reported similar findings. Those early educators who worked in school-based settings (e.g., early childhood special education, early childhood family education, and school readiness) were more likely to have at least a bachelor's degree, compared to their Head Start, center-based, and family childcare counterparts.

Han and Neuharth-Pritchett (2010) found that teachers with at least a 4-year degree were more likely to recognize and believe in the use of developmentally appropriate practices than were those with lower education levels. Tout et al. (2005) also report that educators with higher levels of education that included a comprehensive knowledge of child development were more likely to have high-quality classrooms and better teacher-child interactions compared to their counterparts with lower levels of education. In a review of seven research studies on teacher qualifications and early childhood quality, however, Early et al. (2007) found little evidence to suggest that having at least a bachelor's degree meant a higher quality early care environment and improved early childhood outcomes. Instead, it was suggested that this relationship was not significant because teachers did not receive the support they need to implement what they know and their college coursework did not address the specific practices they need to implement the curriculum with fidelity. Phillips, Mekos, Scarr, McCartney, and Abbott-Shim (2001) found that quality early care environments were most highly related to teacher compensation and parental fees and that high teacher wages was also highly related to quality professional development.

Teacher quality as it relates directly to authentic assessment requires further research. Schappe (2006) states that teachers' inappropriate assessment practices can waste valuable instructional time and lead to other negative consequences, such as lack of necessary supports children may need and the misidentification a child's skill level. ". . . [T]he significant variable in the successful integration of formal performance assessment is the teacher" (Schappe, 2006, p. 192)

The Need for Change in Early Childhood Assessment Practices

Quality early childhood assessment practices are dependent on a multitude of systems, agencies, policies, professionals, and families working together. Those working directly with children, however, are the ones primarily responsible for conducting assessments (NRC, 2008). Unfortunately, early childhood assessment systems and the components within these systems are often disparate, inconsistently implemented, and confounded within and between early childhood programs (Banerjee & Luckner, 2013; NRC, 2008; Pretti-Frontczak et al., 2002). In a recent study of early childhood assessment practices, Banerjee and Luckner (2013) found that although a majority of early childhood professionals rated themselves as "knowledgeable" or "very knowledgeable" on authentic assessment, the professionals also reported not having enough time to conduct assessments and not having enough knowledge of specific assessment tools. Susman-Stillman et al. (2014) found similar results. Early educators in Minnesota reported that they were highly knowledgeable about assessment; however, they also reported that the challenges of assessment (e.g., time, cost, competing priorities, etc.) hindered them from implementing it consistently. Early educators also reported struggling with conducting authentic assessment for children who have disabilities,

children who are English Language Learners, and children who are from culturally and linguistically diverse families (Banerjee & Luckner, 2013; NRC, 2008; Susman-Stillman et al., 2014).

McNair et al. (2003) found that early educators reported finding implementing the fundamental requirements of ongoing assessment difficult, including embedding assessment into daily practice, data collection and analysis, and knowing how to use those data to influence classroom practices and learning. Early educators have also reported using assessment practices in unsystematic ways. Teachers report that they know how to collect data through various means, but they typically use the data they gather to report on the child rather than to modify their instructional practices to improve child outcomes. They also found that teachers know and use authentic assessment language appropriately, but still do not consistently use assessment for its intended purpose—to inform individual instruction and improve child outcomes (McNair et al., 2003).

Challenges to implementing authentic assessment have also been attributed to early educators' lack of knowledge regarding the purposes of assessment, not understanding the difference between screening tools and assessment tools, and lack of appropriate training on fundamental principles of assessment, especially how to analyze and use data to inform practice (Banerjee & Luckner, 2013; Madaus et al., 2009; NRC, 2008; Susman-Stillman et al., 2014). If it is possible to determine which of the early childhood assessment components/skills have the greatest capacity to influence the implementation of assessment and its quality, then early childhood professional development efforts can focus on those components and the skills needed to implement those skills with fidelity.

Akers et al. (2015c) note that there has been little research done on early childhood teachers' use of ongoing assessment or the specific skill set(s) teachers need to implement assessment with fidelity. There is a great need to know what individual teachers do regarding early childhood assessment. Current research focuses on groups of teachers, but Akers et al. (2015c) suggest that it is important to have more research that is focused on individual assessment behaviors. They argue that it is critical that research be done on the integral components of ongoing assessment in order for us to truly understand how to best support early childhood professionals with assessment.

Additional research should systematically examine the steps of high-quality ongoing assessment and individualization. This will require careful study of what is needed to implement the steps that are critical for improving instructional practice and for attaining more positive child outcomes. (Akers et al., 2015c, p. 2)

The proposed research attempted to do exactly what Akers et al. (2015c) were suggesting: determine the specific parts of the assessment process that have the greatest possibility of influencing implementation, and outline specific strategies that teachers need to consistently implement early childhood assessment with fidelity.

Theoretical Frameworks: Glaser and Strauss' (1967) and Charmaz' (2014) Grounded Theory Method

The current lack of evidence available on how early childhood educators actually implement authentic assessment and what specific assessment skills they need to improve outcomes for young children led to the use of grounded theory as the foundation for this research. Grounded theory, as defined by Glaser and Strauss (1967), is “the systematic generation of theory from data” (p. 1). The development of grounded theory came from

recognition that there are times in evaluation when the need to study phenomena in the field, i.e., in a realistic situation with people who experience a phenomenon in real-time and how that phenomenon occurs and changes over time, is of the utmost importance (Strauss & Corbin, 1990). It differs from traditional methods—where hypotheses are generated from existing theories—and focuses instead on the creation of theory during and after data collection (Charmaz, 2014).

Glaser and Strauss (1965) created “Substantive Theory” at a time when the perceived value of quantitative research far outweighed the value of qualitative research. They suggested that all information observed and obtained are data and that observations, field notes, and the generation of hypotheses could be used to accurately describe a situation, as well as be used to develop a framework. The researchers recognized that no matter the situation, data collection and hypothesis development occur simultaneously—that is to say that as you collect data, you are also generating hypotheses about your observations. New hypotheses are then generated by incorporating additional data into the older hypotheses. As the data and hypotheses are analyzed over time, a theoretical framework will often arise that defines the situation in more complete terms (Glaser & Strauss, 1965).

The rigor of grounded theory is as stringent as it is in the more forcing or quantitative methods of survey and control oriented research. In grounded theory interpretations of hypotheses are constantly checked by the constant comparative method. They are as much a part of the theory and as grounded in it, as the main concern and its continual resolving. (Glaser, 1998, p. 11)

Glaser and Strauss (1967) identified four components of grounded theory that must be met in order for the theory to be applicable to a given situation. “Fit” refers to the data and whether the data accurately represent what is going on in the world being

studied. “Understanding” refers to the collected data being easy to comprehend because they accurately represent what is happening in the environment. “Generality” occurs when the data are accurate and understandable and the posited hypotheses are broad enough to be applied in like situations. Finally, “control” refers to the ability to put parameters around behavior based on a data-driven, understandable theory that can be applied in numerous situations (Strauss & Corbin, 1990). Strauss and Corbin (1990) also highlighted the need for grounded theory to include a level of creativity that forces the researcher to look for alternative data and explanations of those data to describe what is actually occurring in the field.

Since its inception, other researchers have added to and modified grounded theory. Strauss and Corbin (1990) added to the initial definition of the grounded theory approach by stressing the importance of “theoretical sensitivity” (p. 41). Particularly, they noted that researchers bring their own experiences, perspectives, and biases to any work. They also suggested that data analysis within grounded theory be a three-stage process (i.e., open, axial, and selective coding) whereby researchers identify categories, define the parameters of those categories, make connections between codes, and use tools (e.g., questioning and/or word/phrase analysis, etc.) to gain insight into a specific theory (Corbin & Strauss, 1990; Walker & Myrick, 2006)

Charmaz (2014) furthered the definition of grounded theory by incorporating a “constructivist” perspective that supports greater flexibility in its application. Much like Strauss and Corbin’s approach (1990), the constructionist grounded theory incorporates the idea that the researcher brings his/her own experiences, knowledge, and skills that will influence the research and that these factors deserve examination. Constructivist

grounded theory still adheres to many of the principles originally formulated by Glaser and Strauss (1967), such as an making use of a repetitive process, simultaneous data collection and hypothesis development, and open coding. It does not, however, subscribe to the idea that the researcher is a neutral party in the process (Charmaz, 2014).

These additions and changes to the original theory have led to divergent views within the field. Walker and Myrick (2006) addressed this divergence of ideas between the founders of grounded theory (i.e., Glaser and Strauss) and determined that the dissimilarity lies solely in the type of data analysis (two-step vs. three-step process) and the researchers' role in that analysis.

The use of grounded theory can be found throughout many academics fields (e.g., nursing, sociology, management, psychology, etc.) (Tan, 2010; Thomas & James, 2006). Grounded theory is the most appropriate choice for this research because although there is a research base and consensus for what constitutes high-quality authentic assessment practices, there is little to no research on what practicing teachers deem as critical components of actually implementing authentic assessment. Through qualitative data collection, analysis, and hypothesis development, the beginning of a theory of what is deemed as most relevant to early educators regarding implementing authentic assessment should develop.

Based on the literature review, several grounded assumptions have been made. One assumption was that early educators have training and professional development available to them on child development, curricula, and authentic assessment. Another assumption was that despite the availability of this information, teachers continue to

struggle with implementing the different components of the authentic assessment process, especially using data to inform and modify instruction.

This literature review provided a brief history of early childhood education, definitions of school readiness, and preschool as the primary method for getting children ready for school. The history of early childhood assessment, its purpose, and its role in measuring outcomes and school readiness for young children were also outlined. The multiple challenges early educators face implementing authentic assessment were reported. Based on this review, the need to determine teachers' perceptions of what really matters when attempting to use and implement authentic assessment becomes critically important and is the focus of this study. The next chapter outlines the study's two research questions, the methodological approach used within this research, and the design for this study.

CHAPTER 3: RESEARCH METHODOLOGY

Based on the literature review, the following conclusions have been reached: 1) early educators are not consistently implementing authentic assessment with fidelity, 2) professional development opportunities related to implementing authentic assessment are limited; and 3) early educators have a multitude of obstacles, including competing priorities, multiple programmatic requirements, daily classroom management, etc., which make consistently implementing all parts of the assessment cycle difficult. The research questions for this study include:

1. *What teacher knowledge, skills, and strategies influence the successful implementation of curricula and authentic assessments within an early childhood educational environment?*
2. *What components of the assessment cycle (i.e., observation/data collection; data analysis; data interpretation; hypothesis development; modification/implementation of individualized instruction based on the assessment data; reporting) do teachers perceive as having a greater likelihood of improving instruction and outcomes for young children?*

Methodological Approach

This study made use of a qualitative, mixed methods approach. Qualitative methods were chosen because they allow the researcher to gather data that are typically more detailed, more dynamic, and more flexible than quantitative data (Corbin & Strauss, 2008). Corbin and Strauss (2008) state, “[Q]ualitative research allows researchers to get at the inner experience of participants, to determine how meanings are formed through and in culture, and to discover rather than test variables” (p. 12). Creswell (2012) also pointed out that the focus of qualitative research methods is on what is occurring in the situation, rather than on the researcher or the study participants. Qualitative methods lend themselves more easily to environments beyond academia; that is, it may be that qualitative data (e.g., interview transcripts, stories, case studies, etc.) are easier for the general public to understand compared to statistical data (Corbin & Strauss, 2008). Finally, qualitative methods were chosen because this research is being driven by grounded theory, which is developmental in nature (Charmaz, 2014). There is no conceptual framework from which to work and little research on what teachers’ believe

to be critical in implementing authentic assessment, so there is a need for the methodology to glean as much detailed information as possible to inform a potential theory.

Qualitative Methods

This research utilized two distinct types of qualitative data collection methods to determine what parts of early childhood assessment are most integral to successful implementation. Interviews and focus groups were the most appropriate methods for this research because they allowed the researcher to gain detailed information about what may or may not be happening in the field. Gubrium and Holstein (2002) stated that although interviewing may appear to be a relatively simple process, the process is actually quite complex. Quality interviews are dependent on the rapport between a prepared and knowledgeable interviewer and an interviewee who is willing to share his/her inner thoughts and feelings through conversations. The job of the interviewer is to actively listen to hear the meaning being conveyed by the person being interviewed (Warren, 2002).

Focus groups are equally complex in that they require a knowledgeable and skilled facilitator to engage a small group of people who have some common knowledge or experience that they are willing to share. Krueger and Casey (2000) identified nine different purposes for conducting focus groups: decision making, product/program development, customer satisfaction, planning and goal setting, needs assessment, quality improvements, understanding employee concerns, policy making and testing, and as a primary or secondary research tool. Focus groups were chosen for this research study

primarily for the purposes of program development, needs assessment, quality improvements, and as a primary research tool.

Quantitative Method

A 19-item assessment skills rating scale was developed that asked teachers to rate the extent to which they used different assessment skills in their work (see Appendix A). The list of skills included in the scale were based on authentic assessment recommended practices, such as observing in the natural environment, recording observations, using video and pictures as documentation, referencing early learning standards, using assessment data to identify children who are gifted and those who may have disabilities, including parents in the authentic assessment process, and more (Bagnato, 2007; NRC, 2008). For each question, the teachers could choose from one of four responses: 1) to a great extent, 2) to moderate extent, 3) to a slight extent, and 4) not at all.

Participant Selection

The participants in this study included 13 Head Start lead teachers. These lead teachers were all women, with an average age of 39.6 years (range: 27-55 years). Ten of the women identified as white, one as Asian, one as Hispanic, and one as multi-racial. Nine teachers reported having a bachelor's degree, three have associate of arts degrees, and one has a post-graduate degree. On average, the teachers have approximately 10 years of early childhood teaching experience (range: 4-20 years) and have worked approximately nine of those years in a Head Start program (range: 2-20 years). Eight of the 13 teachers have spent their careers working for Head Start and Early Head Start. Three teachers previously worked as home-based child care providers, and two worked in school districts prior to working at Head Start. Three teachers said their program was

located in an urban area, nine said they work in a suburban area, and one said that she works in a rural area. All 13 lead teachers were interviewed as part of the research, and 12 of the lead teachers participated in the focus groups. One teacher chose not to participate in the focus groups.

To identify these participants, the researcher contacted the Executive Director of the Minnesota Head Start Association to discuss which Head Start programs in Minnesota might be willing and ready to participate in this research. From that list, five Head Start Directors within Minnesota were sent a recruitment email from the researcher. A copy of the administrator recruitment letter can be found in Appendix B. Three out of the five initial programs responded to that email, and all three opted to participate in the research. Prior to starting the data collection, short presentations were given, via conference call, to each Head Start Director and her staff on the research questions, the proposed methodology, and the benefits of participating..

Head Start Directors, Education Coordinator(s), and Disabilities Coordinators were asked to develop a list of lead teachers who met the following criteria: 1) worked in Head Start as a lead teacher for more than three years; 2) was capable of meeting program standards in implementing instruction; 3) was capable of modifying instruction to meet child-identified needs; and 4) had demonstrated success at getting preschoolers ready for kindergarten. The nominations were matched to the criteria, and a list of teachers was generated for involvement in the study. Individual teachers were recruited via the education coordinators. The education coordinators emailed lead teachers to ask if they would be willing to participate in the research. A teacher recruitment letter was attached to the email sent by the education coordinator (see Appendix C). Thirteen

teachers agreed to be interviewed. Guest, Bunce, and Johnson (2006) suggest that saturation can be achieved after conducting 12 interviews.

Participant Consent, Confidentiality, and Protection

The researcher obtained approval from the University of Minnesota's Institutional Review Board (IRB) prior to engaging participants in the study interviews and focus groups. The documentation included a description of the study, a proposed consent form, the interview protocol, and the focus group protocol. Each lead teacher was given time to read, ask questions, and sign the consent form (see Appendix D) prior to the interview process. The consent form addressed both the interview and focus group processes.

As part of both the interview and focus group protocols, statements were read by the researcher regarding the voluntary nature of the study; that participants could end their involvement with the research at any point in time; the risks (or lack thereof) involved with participation; the intent of the research; and how the data would be used to inform early childhood assessment practices. Participants were also informed that all data collected would be kept confidential in the storage, analysis, and reporting of the data. Participants were encouraged to ask questions at any time, including after the data collection processes were completed.

Both the interviews and focus groups were conducted in offices or meeting spaces that were private and quiet. Audio recordings and transcripts of the interviews and focus groups were stored on a password-protected computer accessible only by the researcher and the transcriptionist.

Instrumentation

Teacher Interview. The researcher developed an Implementation Interview protocol (see Appendix E), grounded in the authentic assessment research (Banerjee & Luckner, 2013; NRC, 2008). The interview protocol was reviewed initially by professionals from the University of Minnesota's Center for Early Education and Development (CEED) who are knowledgeable about early childhood assessment and instructional practices. The interview protocol consisted of 14 questions that were intended to gather data for both research questions. Interview questions were derived from the existing early childhood assessment literature (Akers et al., 2015c; Banerjee & Luckner, 2013; NRC, 2008; Susman-Stillman et al., 2014). The literature on qualitative methods informed the way in which the questions were organized and how many questions were included (Creswell, 2007; Strauss & Corbin, 1990). The majority of the questions focused on teachers' perceptions of, and specific strategies related to, high-quality individualized instructional practices, curricular implementation, and assessment. The interview protocol was reviewed by Dr. Richard Krueger and Dr. Karen Storm for technical adequacy, validity, flow, and ease of implementation.

Teacher Focus Groups. A focus group protocol was developed (see Appendix F) based on the lead teachers' responses to the interview questions. The development of the focus group questions was guided by early childhood assessment research (Akers et al., 2015c; Bagnato, 2007; Banerjee & Luckner, 2013; NRC, 2008; Susman-Stillman et al., 2014). Procedures for the focus group were based on the work of Gubrium and Holstein (2002) and Krueger and Casey (2000). As with the interview protocol, the focus group protocol was reviewed by Dr. Richard Krueger for technical adequacy, validity, flow, and

ease of implementation. The following topics were covered within the focus group: experience with authentic assessment tools and implementation, knowledge of authentic assessment and assessment practices, strategies for implementing authentic assessment, challenges/barriers to implementation, and support needs.

Assessment Skill Rating Scale. A 19-item rating scale was developed that asked participants to rate the extent to which they use different assessment and instructional skills in their work (see Appendix A). The teachers were asked to complete the rating scale during the focus group. The teachers' responses to the items were reviewed by the researcher during the focus group and used to guide the rest of the focus group discussion. The rating scale was reviewed for accuracy by CEED personnel who are familiar with early childhood assessment recommended practices.

Data Collection Procedures

Interview Data Collection. Interviews were scheduled via email between the researcher and the lead teachers. Interview data were collected in person in the school where the lead teacher works or at the Head Start administration building. Interviews were completed between April and June of 2016. Consent to participate in the interview was shared at the beginning of the interview process (see Appendix C). The consent form outlined the research purpose, procedures, expectations of participation, potential risks, potential benefits, notice of confidentiality, and compensation. The interview took, on average, 55 minutes to complete, and teachers were paid \$15 for their time. Each interview was recorded, and the audio file was transcribed for use in analysis.

Focus Group Data Collection. Focus groups were scheduled via email between the researcher and the lead teachers. Three focus groups were conducted between April and June of 2016. Twelve of the previously interviewed Head Start lead teachers opted to participate in the three focus groups, with four teachers in group one, three in group two, and five in group three. The focus groups were held at either the school where the Head Start program is located or at the Head Start program's administrative offices. In addition to answering the questions in the focus group protocol, participants rated the extent to which they use data collection, data analysis, modification of instruction, and reporting skills. The 12 focus group participants completed this 19-item rating scale approximately 40 minutes into the focus group time and took approximately 10 minutes to complete the form. On average, the focus groups lasted 75 minutes, and teachers were paid \$25 for their time. Each focus group was recorded, and the audio file was transcribed for use in analysis.

Data Analysis

Interview data can be coded in any number of ways. One option is to have pre-conceived ideas about the codes, based on the literature. Another option is to employ a more organic, data-driven method to classify ideas. Data can also be classified by one person or a team of people (DeCuir-Gunby, Marshall, & McCulloch, 2011; Weston, Gandell, Beauchamp, McAlpine, Wiseman, & Beauchamp, 2001). Typically, qualitative data analysis is an iterative process where themes are identified and modified over multiple coding sessions (Charmaz, 2014; Creswell, 2007; Thomas 2006). No matter the method, the goal of any type of coding is to categorize, simplify, and conceptualize data (DeCuir et al., 2011; Weston et al., 2001).

Glaser and Strauss (1967) described the “constant comparative method” as the way in which a grounded theory is created. A researcher using the constant comparative method gathers data through any number of methods, develops a baseline theory, and continues to gather, analyze, and compare additional data to the baseline theory until a more comprehensive concept has been developed. Corbin and Strauss (2008) suggested using open coding to initially categorize data into groups. Open coding allows the researcher to identify all possible themes and then break down the overarching themes into smaller groups to give greater context to the data. Charmaz (2014) supported open-ended coding, but also acknowledges that researchers bring knowledge and skills to the coding process. Charmaz (2014) proposed a two-phase open-coding process for grounded theory. First, coding should occur in sections where small bits of information (e.g., a sentence or specific words) are identified. Second, larger, more cohesive groups of information are classified together to form a more coherent picture of the emerging theory. Charmaz (2014) states, “By careful attending to coding, you begin weaving two major threads in the fabric of grounded theory: generalizable theoretical statements that transcend specific times and places and contextual analyses of actions and events” (p. 113).

Following the previously described format, transcripts were developed from the interview and focus group recordings and were analyzed for themes in a multi-phase process. Analysis was conducted using NVivo software package (Version 10). NVivo is a qualitative data analysis software that allows users to upload source documents (e.g., interview transcripts, focus group transcripts, photos, etc.) and then categorize the information within those documents. NVivo allows the user to create concepts, known as

nodes, in which the data are stored (Bazeley, 2007). Users can also query within the data for word frequency, coding, and text search.

The transcribed interviews were analyzed three distinct times by the researcher. In the first round, the data were coded into parent nodes and reviewed for agreement and any additional themes. In the second round, data were disaggregated within parent nodes and coded for child nodes (i.e., themes within parent nodes). The third round was conducted to determine the levels of agreement and appropriateness from the first two rounds of coding.

The data from the focus groups were analyzed in the same manner as the interview data. The initial round of analysis included coding parent nodes only. The second round of analysis led to disaggregation of the data and development of more detailed themes. The themes were compared across interview and focus group data for similarities and differences. The third round was conducted by the researcher and used as a validity check to ensure that the first two rounds of coding were accurate.

The data obtained from the rating scale were analyzed by calculating frequencies and means using the following scale: 1 = not at all, 2 = to a slight extent, 3 = to a moderate extent, and 4 = to a great extent. These means were compared against the qualitative provided by the interviews and focus groups and used to confirm or refute what early educators reported.

Positionality and Preconceptions of the Researcher

Part of conducting qualitative research and the coding of qualitative data depends on the ability of the researcher to search for and identify any subjectivity that may occur

based on the researcher's knowledge base and experience (Piantanida & Garman, 2009; Wasserman, Clair, & Wilson, 2009). Wasserman et al. (2009) state, "Fundamentally, bias is a problem primarily generated in the act of empirical observation. Possible confounding factors might include the researchers' political and social values or personal conflicts and self-interest" (pp. 360-361).

The overall bias inherent in this research was that I believe in the efficacy of early childhood programming, especially that of Head Start, and the efficacy of authentic assessment as a means to determine a child's strengths and areas for improvement. I believe in the positive academic and social-emotional effects Head Start programming has on vulnerable young children (i.e., those who live in poverty, who have disabilities, and who may be English Language Learners), despite evidence of those effects diminishing over time (Currie & Thomas, 1995; Lee, Brooks-Gunn, Schnur & Liaw, 1990; Lee & Loeb, 1995; DHHS/ACF, 2010).

Several additional biases may have influenced the methodology and data analysis portion of this research. My previous experiences working in a Minnesota-based Head Start program and as a Head Start Training and Technical Assistance provider in the state, as well as my more recent research in early childhood authentic assessment, gave me insight into how early childhood and early childhood assessment systems typically work. These experiences gave me context for why curriculum and assessment are important within early childhood programming and led me to asking questions about how teachers actually implement assessment, rather than making assumptions about how assessment gets implemented.

Other factors that may have influenced the methodology and data analysis include my knowledge of Head Start performance standards, the program's 10-year history of conducting assessment, and the fact that the majority of Minnesota Head Start programs typically use one of three standardized assessment tools. This knowledge led me to choose to research Head Start lead teachers' assessment practices rather than the assessment practices of early educators within family child care, center-based child care, or school-based preschool programs. I knew that there would be some homogeneity within Head Start programs (e.g., professional development offered, curricula, assessment tool, etc.), which may have removed some of the confounding variables that might have occurred within the other populations listed. My knowledge of the types of children who typically attend Head Start also influenced my decision to conduct my research within Head Start. I knew that Head Start programs would enroll children between the ages of 3-5 years old who live within certain levels of poverty and who represent a diverse population (e.g., children who are English Language Learners, children with disabilities, and children from culturally and linguistically diverse families). This information, however, may have also biased the sample selection and coding of data. To negate any potential effects of these biases and this knowledge, I regularly discussed my research with my early childhood education colleagues at the Center for Early Education and Development at the University of Minnesota and asked for feedback. I also had evaluation faculty members review and provide feedback on the themes identified.

I have spent my career working in the field of early childhood and special education, specifically in the area of technical assistance provision. I have spent more

than 15 years of my life trying to aid local, regional, and state-level programs to not only follow laws/policies/performance standards, but also to support these programs in engaging in best practices for children who are involved in their educational programming. I am motivated by the notion that teachers need concrete, practical knowledge and support to implement any initiative, including authentic assessment.

Acknowledging these potentially biased thoughts and feelings, and how they may have influenced the recruitment, methodology, and data analysis, aligns with the “constructivist” viewpoint of grounded theory (Charmaz, 2014). Charmaz (2014) posits that the researcher is a non-neutral party within grounded theory research. Prior experience and interactions the researcher has must be made known, as they help to describe the “social reality” of the situation being investigated (p. 13). To combat any potential impartiality, I discussed my design and theory with faculty who do not share my experience and who have not had experiences working in early education settings.

Challenges with the Research Design

There were challenges to the research design that may have influenced the results. One limitation was the size of the sample. This study’s sample size of 13 lead Head Start teachers from three different Head Start programs was small. Given that there are 34 Head Start/Early Head Start programs throughout the state, the three participating programs only represented a small number of overall Head Start programs throughout the state. Some limitations of qualitative research can be alleviated by purposeful sampling, by collecting data at different time periods and in different situations, and by a well-qualified and well-trained researcher (Patton, 1999). Marshall (1996) states, however, that “an appropriate sample size for a qualitative study is one that adequately answers the

research question” (p. 523). The three programs that participated represented suburban and rural communities; no metropolitan programs opted to participate in the research. Having a greater number of programs and lead teachers participate in the research might have added even further detail to the findings presented.

Another challenge was related to coding qualitative data within grounded theory research. There are two “camps” within the field of grounded theory related to the role of the observer. Some researchers view the observer as a neutral party who can objectively code data (Glaser, 1998), whereas others view the observer as someone with experience and perspectives that influence the way in which data are coded (Charmaz, 2014). If you take the viewpoint that the observer is not neutral and has biases that may influence the coding of data, then this become a potential limitation. If, on the other hand, you assume that the observer can remain objective, then this limitation ceases to exist.

Within the next chapter, the themes identified during the data analyses of interview and focus group responses are presented, as well as quotes from early educators to support or refute these themes. The assessment skills rating scale results are also presented. Discussion of the findings can be found in Chapter 5.

CHAPTER 4: RESULTS

The results presented in this chapter were derived from the qualitative data collected and analyzed from the interviews and focus group sessions. Quantitative data from the teacher rating scale are also summarized to provide further descriptive information on teachers’ use of specific assessment skills. Data analysis led to the identification of multiple themes, which are each described in this chapter. The results are

organized and presented by the two research questions. Data, including quotations, are presented to support the individual findings. A synthesis of the findings for each research question is also presented at the end of each section.

Research Question 1

To answer the question, “What teacher knowledge, skills, and strategies influence the successful implementation of curricula and authentic assessment within an early childhood educational environment?” questions were asked of early educators within the interview and focus group sessions. Specifically, the teachers were asked about their knowledge of child development, curriculum, and assessment. They were also asked questions about strategies for implementing curriculum and assessment that work, strategies that do not work, and any barriers to implementing or modifying their instruction. They were invited to describe the most important aspect of classroom instruction (e.g., improving academic skills and/or improving social emotional skills) and the curriculum and assessment support needs (e.g., coaching, training, administrative support) they have. Nine major themes were identified based on the analysis of the interview data. These themes included: 1) teachers’ knowledge of curriculum and authentic assessment, 2) teachers’ lack of knowledge of learning standards, 3) teachers’ ongoing professional development needs, 4) teachers’ understanding of effective strategies for implementing curriculum, 5) teachers’ challenges to implementing the curriculum, 6) teachers’ use of specific authentic assessment skills, 7) teachers’ challenges to implementing authentic assessment, 8) teachers’ needs for support to implement curriculum and authentic assessment, and 9) teachers’ use of formal and informal assessment strategies.

Teachers' Knowledge of Curriculum and Authentic Assessment

Teacher knowledge and understanding of both curricula and authentic assessment are fundamental to their successful implementation. Teachers must know the intent and purpose of the curriculum, as well as how to use the curriculum to individualize instruction so that a child improves his/her readiness for school. Teachers must also understand the intent, purposes, and procedures for administering authentic assessments, and how to appropriately use the assessment results to plan and improve instruction for young children.

All teachers reported that their knowledge of the curriculum and its associated materials was excellent. They cited the ongoing training that they received as the main reason for their high level of knowledge. One teacher shared,

Head Start's really, really good with the trainings. There are so many trainings. I couldn't even tell you all without pulling up something, my training record. They do a lot of training on social emotional development, a lot of training on the curriculum system we use, and just the basic trainings, too, for schooling.

Another stated, "I think the trainings have been wonderful. I look back over the years at just how much we've gotten, and it's great." The teachers reported that their local programs often bring in national trainers for curriculum and authentic assessment professional development. One teacher described,

The trainings we actually use most--we switched curriculums about two years ago--was that new curriculum and the information because that was actually something we were going to use in the classroom. It was very specific. Here's the curriculum, and this is what you're going to use, so we actually needed it.

All teachers also reported that their local programs facilitate learning among peers during professional development days. All of the teachers reported having a minimum of three years' experience with the curriculum used by all three Head Start programs and its

corresponding assessment tool. Programs varied in their use of the paper or online version of the assessment tool.

Teachers were asked to describe both authentic assessment and the process for using assessment data to individualize instruction. All teachers were able to identify the different components of authentic assessment (i.e., collection of facts, data analysis, modified instruction for individuals and groups, reporting on progress, and planning for assessment). When asked what someone who knew nothing about assessment would see within a Head Start classroom as evidence of its implementation, most of the teachers described the gathering of data (e.g., observations) and how that information impacts instruction. One teacher reported,

You're going to see during small group time teachers are really intentionally watching for things and teaching at the same time and making those notations or taking pictures. Then you might see during throughout the day if that assessment is working because we've done what we should to increase those other things throughout the classroom. So during free choice, you're going to hear those language pieces where they're talking back and forth with each other or whatever it may be.

Another noted, "I think especially about small groups because I'll use the information when I'm with the kids in the small groups. If you came and watched that same small group three days in a row, with each group you would see it done a little bit differently."

Teachers' Lack of Knowledge of Learning Standards

The effective implementation of curricula and assessment is dependent on teachers' knowledge of typical, age-specific child development and the scope and sequence of developmental progression. Every state has developed early learning

standards for children ages 3-5 to support developmentally-appropriate practices within preschool programs.

The teachers were asked specific questions about their knowledge of Minnesota's Early Learning Standards (Early Childhood Indicators of Progress: ECIPs) and Minnesota's K-12 Academic Standards. While all teachers were aware of the ECIPs, they also reported that they rarely, if ever, referred to them when attempting to implement the curriculum or conduct authentic assessments. Said one educator of the Early Childhood Indicators of Progress, "We've all heard of it. Do we have it memorized? No." On the other hand, one educator felt strongly that although she rarely referred to the ECIP document hanging on the wall in her classroom, she knows that the curriculum and assessment tool align closely with the early learning standards. Because of this alignment, she felt that her knowledge of child development and early learning standards was great. "I think we're using it in practice, but we couldn't recite them to you." Another teacher stated, "You teach every day and you're so used to the way you teach that it's embedded in your day already, that you can't go and recite them all. It's just there." Teachers acknowledged, however, that they know much less about the K-12 standards compared to the ECIP standards. All teachers mentioned that they had referred to and used the standards in their college coursework, but that they had not referred to them since that time.

Teachers' Ongoing Professional Development Needs

Early educators rely heavily on the ongoing professional development opportunities afforded them by their local Head Start program and the Minnesota Head Start Association. The teachers receive professional development on many topics (e.g.,

curriculum, assessment, social emotional development, policies and procedures, etc.) throughout the year. Teachers depend on this professional development to provide them with the knowledge they need to be successful in their work.

All educators reported that they have multiple opportunities to gain additional information on their program's chosen curriculum and the assessment tool, especially as a new employee. The teachers reported that training on the curriculum and assessment tool is intense as a new employee and is provided less often once the teacher has been with the program for more than two years. Related specifically to assessment, another teacher said,

We receive a considerable amount of training, which is good. I feel like just in the last few years, it's like okay everything has been fairly consistent now and we're all on the same page and we all have the same training. But before that, it was kind of like now we're going to do it this way, and now we're going to do it that way. I think we probably all knew what to do individually, but it helps having that training and being on the same page and knowing that we're doing it right.

The teachers were asked if their college coursework prepared them for teaching from the curriculum and using authentic assessment tools within the Head Start classroom. The majority of early educators noted that their college coursework did not prepare them, however, the professional development they receive from the Head Start program did. One educator stated, "I want to say that I've learned more with the professional development than I did in the classroom. Education helps you and gave me the base knowledge to start, but I've learned and grown so much more so since then."

The teachers also noted that training, especially training on authentic assessment, has become more individualized to meet the needs of the various teachers within the program. One teacher said, "And it seems like there's been like two or three different

years they've given like an extra session on authentic assessments, just because maybe they found some that worked or found some were not doing a great job with authentic assessment.”

When asked what recent professional development had the most impact on their ability to be a high-quality educator, the lead teachers most often cited trainings related to the social-emotional development of young children and behavior management training rather than that of curriculum and assessment. One educator with more than 10 years of experience said,

Head Start has changed. When I started, it was all about the kids being social, teaching the kids to deal with things and just social. It wasn't as much academics back then whereas now it seems, oh, maybe a few years ago it was mainly just the academics and not social. I think we're getting back now to the social has to come first before the kids can learn. So I think Head Start's made many, many, many changes. Now it's back to kind of where it was. I mean, there's still a big push on academics and there has to be--I understand that, for funding and such--but mental health still needs to be there, too, and I think we're finally getting back to that point.

Teachers' Understanding of Effective Strategies for Implementing Curriculum

The teachers were asked about the strategies they use to implement the curriculum, as this is one of the functions of conducting authentic assessment. Assessment data should inform what and how the early educators teach children. Almost all teachers identified grouping the children as their main strategy for implementing the curriculum and supporting the children in meeting their academic goals. The majority of teachers grouped children into three, small groups. These groups tended to be organized by criteria such as age, behavior, and developmental progress. Teachers may group children by the same age group (e.g., all three-year-olds) or by differing age groups (e.g., three-, four-, and five-year-olds together). Teachers offered that grouping children in the

same age group allows the teacher to focus curricular content to the group needs, whereas having mixed-aged groups often allows the older children to help the younger children.

One teacher stated,

We group kids according to their assessed skill levels. One group will be, we call it the River Group, and then one of the other two groups. So it depends on where their skills are. So they're getting kind of individual for where their skills are at with each other in these small groups, and those are all scaffolded so each child can succeed at them and learn more.

When asked how often they modify the groups, the answers varied among the teachers. Head Start program standards mandate assessing children enrolled in programming three times per school year. Some teachers modify the groups only after these three formal assessment periods. Others modify the groups on a more frequent basis. Said one teacher,

We check them [the small groups] as part of our weekly team meeting that we have every Friday where we kind of check in on the small groups, and I'll ask our program assistant, "How's your small group doing?" One day we may focus on math and the next day it's a literacy small group, you know, so I don't change my kids every time we change small groups, but there's an opportunity weekly to change who's in those small groups, or if need be for the day. We're pretty flexible. It could change. But no, we look at them every week. For sure, I change them around every time after checkpoint season is done.

Several teachers mentioned the importance of planning when it comes to implementing the curriculum. One teacher commented, "I think it's just all in the planning piece--looking at planning it, making sure you have enough time to plan it and implement the pieces fully and just looking at the data is a big piece for some of it."

Another cited planning in coordination with her teaching team as a factor in successfully implementing the curriculum, saying,

I always have a list going of what's going to be coming up next. Then I'm really fortunate to have an assistant who's really good about--she plans a small group, I plan a small group. She's getting centers ready, I'm getting like the large group activity ready. So, the prep work is divided up. She makes instruction a lot easier,

implementing all of the curriculum. Otherwise, just kind of being ahead of what's coming next and having the prep work done.

Teachers reportedly use a multitude of skills to implement the curriculum to support school readiness. More than half of the teachers mentioned the tools (e.g., online lesson planning, curriculum books, teaching cards, etc.) that come with the curriculum and how helpful they are when implementing the curriculum. The curriculum used at all three Head Start programs offers a host of supplemental materials that are intended to aid the teacher in planning, implementing the curriculum, and providing high quality instruction. One teacher said,

The books are really good. Their books are good. The instruction that they're giving us, it's more skills for the kids to like participate, the thinking skills, because there's a lot of questions every day that we have to ask. There's always a question for every day, and there's a focus question for the whole week. So it's really amazing compared to the other curriculum.

The teachers also discussed how they use their knowledge of child development and curricula to engage children in learning. Specifically, they understand that just as adults have different learning styles, so do the children they teach. One early educator shared,

I really try to hit all the areas of learning. So I obviously speak, but I'm doing a lot of hands on, so the visual learners. I try...so we do the letter of the week and then so I will put the letter--then we all look through our room. Where we do see--how many letters can we count? I also will always write it, so there's the speaking, there's the visual. For the kids that are kinetic learners, I have them actually--everybody needs to draw the U this week, or you need to draw the U with your finger. Put your writing finger up and draw the U. So I modify it so that all the kids are learning. I try to hit all the different areas. I mean, it's not always possible, but I try to have a visual, have an auditory, have a kinetic somehow just so that, number one, you're getting it multiple times with the kids that need the different learning styles, hopefully one of the ways it's coming in.

Teachers' Challenges with Implementing the Curriculum

At least four teachers mentioned the restrictiveness of the curriculum—that the tools tell the teacher exactly what to do and say and it does not allow for creativity or adaptations for atypical learners (e.g., English Language Learners, children with disabilities, or children from linguistically and culturally diverse families). These teachers stated that the curriculum does not allow the teacher to make modifications or use their previous experience to enhance learning for children. One teacher stated,

I don't like it because they say that we have the preschool version, but it's a lot of really heavy on discussion. When you're three and four and five, you know, you can try to push their subject knowledge with discussion, but it can only go so far because they're three, four, and five. When you don't have the language skills because you don't have that language in your bank, a discussion is also very hard.

Moreover, another early educator said,

It doesn't allow for enough creativity. If you're a program that wants to follow that curriculum by the book to the T, you're not taking into consideration the individualization that needs to be done for the different kids in the different classroom because what works for your classroom might not work for mine.

Another teacher noted how the prescriptiveness of the curriculum affects her own engagement with the materials. She stated,

When it's laid out for you and you're going to do this this week and this, I'm not as into it because it takes away some of that...number one, I can't be like well the kids really did not like life cycles, so I'm not touching that again, you know, or they just didn't get it. So I think planning when we have a little more, I'm free to do it, I'm more enthusiastic, and it helps me--I can tailor it to the kids.

And another teacher mentioned how the rigidity of the curriculum does not take into account her personal knowledge of each child and their individual needs, saying,

So last year when I was able to include my own ideas, I think it really factored in the planning. I could really individualize it towards the kids, go towards their interest levels. I'd really think about plans like, okay, if I want to do this, how can I really break it down to meet the different needs of the kids, whereas now they say it's individualized but I can really only do it so much, you know, given the

materials I have in my classroom, given what the curriculum says I have to do. Today here's the lesson. I can only change it so much within the parameters of what I'm supposed to do.

Teachers' Use of Specific Assessment Skills

During the focus group, teachers were asked to complete a 19-item scale that asked them to rate the extent to which they used specific authentic assessment skills in their practice. The intent of the rating scale was to identify probes to guide the discussion about specific authentic assessment skills and their use. For each item, teachers could choose one of four responses [1 = not at all; 2 = to a slight extent; 3 = to a moderate extent; and 4 = to a great extent]. The mean teacher ratings to the 19 items on the rating scale are provided in Figure 2 (n = 12).

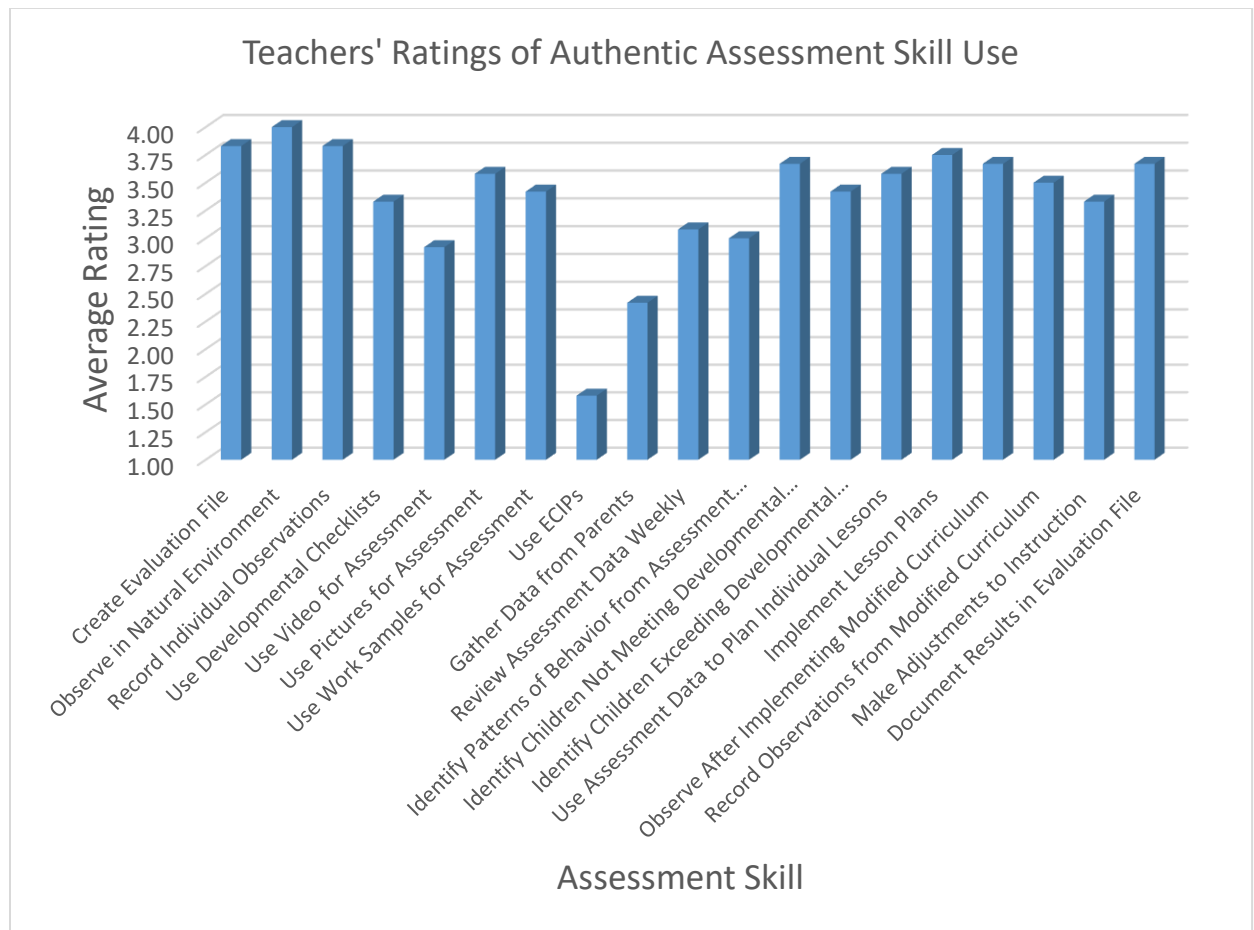


Figure 2. Mean scores of teachers' self-reported authentic assessment skills.

Overall, the teachers rated their use of 19 different assessment skills as high. All 12 teachers reported that they observe children within the natural environment ($\bar{x} = 4.00$). Teachers also reported that they create individual assessment files for the children within their classroom and document assessment results within these individual files ($\bar{x} = 3.67$).

Teachers reported using the following strategies to gather authentic assessment data: individual observations ($\bar{x} = 3.83$), developmental checklists ($\bar{x} = 3.33$), video ($\bar{x} = 2.92$), pictures ($\bar{x} = 3.58$), and the children's work sample ($\bar{x} = 3.42$). Fewer teachers reported getting assessment data from parents than the previously listed strategies ($\bar{x} = 2.42$). Teachers rated themselves the lowest on the extent to which they use the Early Childhood Indicators of Progress (i.e., early learning standards) as part of their assessment process ($\bar{x} = 1.58$).

Teachers rated the ways in which they use the assessment data they collect. Teachers reportedly use assessment data to identify children who are not meeting developmental milestones ($\bar{x} = 3.67$), as well as children who are exceeding developmental milestones ($\bar{x} = 3.42$). Teachers also reported using assessment data to identify patterns within children's behavior ($\bar{x} = 3.00$), create individual lesson plans ($\bar{x} = 3.58$), implement lesson plans ($\bar{x} = 3.75$), and modify their instruction ($\bar{x} = 3.33$).

The rating scale data offer insight into what authentic assessment practices teachers believe they implement regularly. Their ratings also demonstrate lack of certain skill use (e.g., early learning standards). The ratings align with the teachers' responses to questions about authentic assessment skills asked within the focus groups.

Teachers' Challenges to Implementing Authentic Assessment

Effective implementation of authentic assessment is not without its challenges. Previous research suggests that teachers are overwhelmed by the time it takes to collect and analyze data, individualize and modify instruction, and report findings to parents. Teachers also report the lack of support for conducting authentic assessment as challenging (Banerjee & Luckner, 2013; Susman-Stillman et al., 2014).

The Head Start teachers were asked when they first learned about authentic assessment and what they initially thought about what they learned. The majority of the teachers stated that when they first learned about authentic assessment, they immediately recognized that it would “be a lot of work.” A teacher stated,

You know, going through all of our college courses, talking about authentic assessment. At the time, it was very overwhelming for me, just like, I don't know. That's all I remember is it feeling like maybe a lot to do and very overwhelming and what if I don't do it right, what's going to happen?

They also acknowledged that the initial implementation of assessment was daunting. One teacher stated, “Yes, I remember it being really overwhelming to start from not doing it at all to all of a sudden this is what we need to do.” Another said,

I think I was doing it before I knew what it was, but with the information they give in college, it's like that's really overwhelming. How are we going to find time to do that and make sure you're really taking the time to make sure it's authentic and not setting situations up to get certain data?

On the other hand, all but one teacher reported feeling excited about having a system for identifying the developmental skills of the children within their care and using that information to help them teach the children the skills needed to be ready for school. An early educator said, “We get a lot of information, too, for the kids. They learn some

more or something. Like the skills that they're getting into so you can see the progress from the beginning and then you can even see from their progress."

The teachers commented on the difference between authentic assessment and typical school-aged assessment, with one teacher saying,

I think it felt more natural because you can just sit back and observe them and see. You can get a feel for what they are just by observation and just by allowing it to happen, so it felt more natural and not coerced. Then maybe what you're going to get is going to be more natural. Some kids when they feel like they're on the spot can't perform or give you what you want.

Teachers were also asked what, if anything, prevents them from implementing authentic assessment. All teachers identified time to complete all the required tasks of the formal assessment process as the largest barrier to implementing high quality authentic assessment, which directly aligns with their initial perceptions. They noted competing priorities, such as implementing the daily lesson plan and classroom management, that often need to take precedence over data collection and data input. A teacher commented,

We're expected to just cram in 400 things in a three and a half hour day. So sometimes I don't have time to sit down. I will play and interact with the kids during free play, but I also need to be doing library because I don't have a full staff, and I also need to be planning for which kid gets to do Very Important Kid [a weekly classroom activity]. So I may be interacting with the kids during their free play, but I don't have time to actually fully engage and have my iPad out. I mean, the expectation of what your day should look like is way too high for the reality.

At least two teachers mentioned that they input authentic assessment data at home, on their own time.

All teachers also acknowledged that authentic assessment is more difficult for those children who may not be native English speakers or who may have a disability. One teacher stated,

A lot of times we have a lot of language barriers, so it is hard for us to do those assessments on those children when they don't speak English or when they don't understand or even the children that don't talk. I mean, they can. They just choose not to. So sometimes it's really hard. I've had a little girl for the last two years, and, finally at the end of last year, she just started talking.

The teachers also acknowledged that the population of children they serve within Head Start (i.e., children who live in poverty) have high needs for social emotional and mental health supports, which are demanding on the teachers' time and energy.

Teachers' Needs for Support to Implement Curriculum and Authentic Assessment

Given that teachers have voiced their concerns about and challenges with implementing authentic assessment, it is not surprising that they also want greater levels of support. Teachers identified supports wanted in pre-service education, in-service training, and within the classroom.

Two-thirds of the teachers reported wanting more hands-on experience with authentic assessment in their college coursework. These teachers felt that the content they learned on authentic assessment did not prepare them to actual do authentic assessment in a classroom. One teacher said,

You can learn all about it but I think just getting in there and doing it. And yeah, I think we all must have had to go in and do it, but maybe just once or twice, like do observations on a child, but you don't realize how much you actually have to do when you're the teacher. I mean, you can go in for an hour and take all these notes, but that's not what is going to happen when you're the teacher in the room.

All teachers mentioned that they had access to supervisors and/or coaches to support their implementation of authentic assessment. Approximately half of the lead teachers make use of the coaching services available to them, whereas others commented that the coaches lack the actual classroom implementation experience to support the teachers with problems related to implementing the curriculum and assessment.

Some teachers also stated that they did get assessment support from their assistant teachers, and others said they did not. Those teachers who do get support from their assistant teachers stated that they create concrete checklists for the assistants and provide guidance on what the assistant is supposed to assess prior to data collection. One teacher said,

And I kind of feel like if I'm the one putting the report together, I'm the one filling out all the checkpoints, I want to be the one putting in most of the observations, too. I had an awesome program assistant this year, but the observations I wanted from her were very black and white: Can they do this? Can they not? What shapes do they know? Are they able to line them up from tallest to shortest? Very quick, simple, those are the observations.

The teachers also reported that they reviewed the assistants' collected data prior to uploading it into the online assessment system.

My assistant, and we've been together for 18 years, she will enter her observations from her small group, but then I do the finalized. So when it comes time to finalize and give them a score on each thing, I look at all of the observations, and I guess I can choose to weigh more heavily depending on what the activity was or what the note was.

For the teachers who opted not to include their assistant teachers in data collection for authentic assessment, they cited the lack of training on the assessment tool as well as the assistants' lack of experience with data collection and observations as the reasons for not relying on that assistance.

Head Start lead teachers reported wanting very specific supports to assist them with implementing the curriculum and authentic assessment. First, many of the teachers stated that they would like assistance within the classroom so that they had more time to both collect and input observation data. The teachers felt that they do not have enough dedicated time to do authentic assessment activities well because the needs of the

children and the need to manage the classroom take priority. Second, the teachers would like more opportunities to share strategies for collecting, using, and sharing authentic assessment data with their fellow educators. The teachers reported that they do use email to garner additional ideas, but that they would prefer ongoing opportunities to share ideas with their colleagues, both within their program and across Head Start programs.

Teachers' Use of Formal and Informal Assessment Strategies

Authentic assessment can be accomplished in both formal and informal ways. The requirement for conducting a formal authentic assessment, including documentation of skills, online or paper data analysis, and the generation of formal reports using a standardized assessment tool, is dependent on the program. Informal or “in the moment” assessments occur throughout each day, where teachers observe behavior and modify instruction or expectations based on what they see. There is no formal documentation, data analysis, or reporting with informal assessment. Early care and education providers who opt not to use a standardized tool still may be following the authentic assessment cycle to improve instruction for the children within their care. The strategies and practices used by teachers differ, depending on whether the authentic assessment is formal or informal.

Teachers were asked to describe their processes and strategies for assessing children’s development and readiness to learn. Teachers initially described the formal assessment process they are required to do three times during the school year. Teachers also described, however, the authentic assessment they conduct each day during their instruction. The rest of this section describes the differences in strategies and approaches of the formal and informal assessments conducted.

All teachers reported in both the interviews and the focus groups that they collect formal, authentic assessment data three times during the school year (i.e., fall, winter, and spring). The observations and additional data are uploaded by the teachers into the online version of the assessment tool. The programs' Education Specialists monitor the teachers' assessment data, to ensure that the assessments are being completed in a timely manner.

Two-thirds of the teachers noted that the authentic assessment data collected in the winter and spring are more accurate than the data collected in the fall. They also reported feeling more confident about the winter and spring assessment data. They cited the short amount of time spent with the child in the fall, prior to assessment, as the main reason for their lack of confidence in the data. A teacher shared,

Our first 45 calendar days when school starts, there's a lot of preschool screening. So lots of things go on. But in that time frame, you've kind of got to see where the children are at and how they're learning. Sometimes I'll set the kids in their three separate groups and I'm like oh, no, this one knows more or knows less than what I realized, so I'll move kids around. Some groups may have six, some may have five, so I'm really working at trying to figure out where they're at. Hopefully by the first conference, which is November, that I have them in three really strong groups.

The teachers all reported using the assessment data to make changes to their small groups. They also use the data to individualize instruction for children. Once assessment data has been input into the online assessment system, the system provides the teacher with a list of children and their individual goals. Four teachers referred to these as the "RTIs," or "response to intervention." One teacher stated,

Yes, every day we have a small group and then we also have Response to Intervention small groups, which are even smaller than I do during free choice. I just bring them over and we play something fun because, if it's not fun, they're not going to do it during free play, focusing on an area that they need some additional help in.

Beyond the three formal assessment measurement points during the school years, all teachers reported that they also make “on the spot” modifications to the curriculum based on informal, in-the-moment authentic assessments. A teacher said, “You know those [tool name] assessments we’re doing three times a year, but those aren’t the only assessments we’re going to use. We’re not going to wait for [tool name] data to come in at the end of the season; we’re doing on the spot data observation.” This type of quick, thinking assessments are made each day during free play, small group time, and large group time. Additionally, at least four teachers reported conducting monthly informal assessments to determine the development and growth of the children in their classroom, “I do it once a month just to see, if you’ve got that many kids, just to see how they’ve grown and how much they’ve learned.”

Ultimately, teachers reported that they rely heavily on their experience working with children to make split-second decisions about what a child needs to learn a specific developmental skill and that the information they glean from these observations is of value. A teacher stated,

It gives you kind of a more whole picture of the child versus...and it maybe gives you a better understanding of behavior sometimes and why things happen when they do because you get to see the broader picture of the kid versus the kid that can sit on the rug nice or the kid that can sit in the group and do what you ask them. You get to see, oh, they really are pretty talkative when they are away from the group. I think it just gives you a better picture of the kid.

Summary of Research Question One

Overall, teachers reported that their knowledge of curriculum and assessment was more than adequate, but their knowledge of early learning and K-12 standards needed improvement. They acknowledged that the professional development they receive from

their individual Head Start programs is critical to their knowledge base. The teachers all reported using small groups as the primary method for implementing the curriculum and collecting authentic assessment data. They modify these small groups often, either to meet individual children's learning needs or to manage behavioral issues.

Teachers reported using both the online and the paper curriculum and assessment tools (e.g., lesson plans, discussion cards, response to intervention ideas, etc.) available to them. The educators stated that planning is of utmost importance for implementing curricula and assessment. Some teachers appreciated how prescriptive the curriculum is, whereas others felt that the curriculum is too restrictive and removes teacher experience and creativity from the implementation process.

Teachers reported recognizing the intensity and time commitment of authentic assessment while first hearing about it in their college coursework. They also acknowledged the benefits of authentic assessment for young children, when compared to that of typical, school-aged assessment practices. They noticed the benefits of observing young children in their natural environments. The teachers echoed their initial thoughts about authentic assessment in their comments about what inhibits them from conducting high quality assessment. They identified time—time to conduct observations, upload data, run reports, lesson plan, etc.—as the most significant barrier to conducting authentic assessment. The teachers said that assessing children from diverse populations (e.g., children with disabilities, English Language Learners, children from culturally and linguistically diverse families) can prove challenging.

Finally, teachers discussed the differences in their practices and procedures between the three-times-per-year, required formal assessments and the informal assessments they conduct daily as part of their instruction. All teachers have identified strategies (e.g., notebooks, post-it notes, video, pictures, etc.) that they use to collect observation data. All teachers have routines around inputting data into their online system. Teachers stated that the informal assessment skills they use are based on their personal experience working with young children. They also noted that these skills are not planned; the teachers make split-second decisions to modify their instruction based on their interactions with the children while implementing instruction.

Research Question 2

Focus group methods were used to answer the second research question: “What components (i.e., observation/data collection; data analysis; data interpretation; hypothesis development; modify/implement individualized instruction based on the assessment data; reporting) of the assessment cycle are perceived, by teachers as having a greater likelihood of improving instruction and outcomes for young children?” They also were asked about the most important part of classroom instruction, how they modify instruction, and any specific strategies they use to make implementing the curriculum easier for them, during the interview. These questions provided insight into what the teachers perceive as the most important part of authentic assessment. Analysis of the focus group data led to the identification of four themes that aid in answering the second research question: (1) importance of observation; (2) most effective strategies for implementing authentic assessment practices; (3) teachers’ uses of authentic assessment data; and (4) including parents in the authentic assessment process.

The Importance of Observation

Akers et al. (2015c) suggested that for authentic assessment practices to improve, we first must know what the critical components are and then provide professional development and support for teachers on those components. There was considerable agreement among all early educators that the single, most important factor in conducting high-quality authentic assessment was gathering observations of children in the natural environment (e.g., playground, meal times, during play, within the classroom, etc.). Observation is, by far, the most important part of their ability to teach and assess the children within their classroom. The teachers discussed the importance of gathering observations—in both formal (e.g., written observations, videos, checklists, etc.) and informal (e.g., simply interacting with or watching children) ways—to know where a child is developmentally and to inform their instruction. “I use my own observations more and then just the knowledge I have from all this because I’m the one who’s entering everything the aides give me--their observations--and I enter them. So it gives me just a better picture.” These observations are critical components to both the formal and the informal assessing that teachers do every day within their classrooms.

The teachers noted that their ability to make data-based modifications to instruction to meet the needs, both academic and social, of the children with whom they work was also important. One teacher said,

I think just kind of using that data to see where kids are at and then kind of adjusting your curriculum to either help them meet the next level or what steps need to happen to get them to the next level if they’re behind, and then using the RTI system to help kids who are behind consistently approach those goals and work on those goals. I think that’s the most useful part of that assessment data.

Most Effective Strategies for Implementing Authentic Assessment Practices

In the previous section, teachers identified observation as the most important component of authentic assessment. In this section, teachers discuss the strategies they found the most effective for implementing authentic assessment.

The teachers were asked, as part of the focus groups, what strategies they use to implement authentic assessment. The answers varied among teachers; however, most of the teachers commented that they capture much of their observation data using informal, teacher-developed checklists. The checklists typically cover one area of development and approximately five to ten skills that a child should be able to do, given their age. These checklists break down the assessment into smaller units of information on which the teacher can focus. For example, one teacher said, “In order to kind of document how the child did, I have a sheet typed up that has like what I’m looking for [in] that activity. Then you can write the child’s name, and, on this grid, you can mark how high they counted, were they on task.”

Teachers reported that the other most helpful strategies for implementing the assessment were the use of iPads or iPhones to record video and audio of children performing specific tasks, especially language and literacy skills. A teacher reported,

So I do a lot of videos because then I don’t have to put a lot of words with it. It’s right there. So pictures or the work samples. There’s a lot to it. We kind of do informal assessments, you know, for literacy and math with the kids just to kind of see where they’re at. We do those usually every conference period.

One teacher stated, however, that she intentionally does not use her phone or an iPad to capture video or audio data because she believes it removes her from true engagement with the children. Five teachers mentioned using notebooks to capture skills

during free-play times. These teachers keep these notebooks on them throughout the majority of the day and take notes, when able. Others take assessment observations on post-it notes; however, three teachers cited this tactic as one that does not work because the notes often get lost.

The teachers from one of the Head Start program reported that any effective assessment strategy used by one teacher often is shared with the others. One teacher in that group said,

I think just we do a lot of sharing here. When somebody makes an activity or something, then they'll put it on like email so we can all copy and share it, or someone goes to the trouble on the internet--like talking about clothing, uniforms is coming up. So if somebody went to the trouble of collecting a bunch of pictures of people in uniforms, they'll say hey if anybody wants these... Yeah, so that's helpful, too.

Teachers' Uses of Assessment Data

In addition to the strategies teachers use to implement authentic assessment, the teachers reported multiple methods for using the assessment data they collect. All teachers reported that the authentic assessment data they collect are primarily used to support individualized instruction within the classroom and to support the development of children in being ready for school. Teachers also reported that they use assessment data to monitor their own data collection and instruction. For example, a lack of observations in a given domain may be a sign that the teacher is either not collecting enough data in that area or is not focusing her energy on instruction of that domain. One teacher said,

You also use it [the data] to see, well not exactly that report, I guess, but to see what areas you might be missing as far as getting that authentic assessment. Sometimes I'm usually really good at getting that social emotional. I looked at my spring ones, and I'm like I have very little in social emotional! I'm so used to

being really good at that one, I didn't have very much for the spring and had to go back and put a bunch in. But it's a good way to see where you're at as far as observations are in and kind of what areas you need to be focusing on.

The teachers do make use of the online tools offered by the coordinated curriculum and assessment tool. The assessment tool offers an online, lesson planning program, about which one teacher said,

I do use the [assessment tool] lesson plan format, which I think is easier. It helps me kind of--it's faster to plan. It works great right now, so that helps. It also provides my intentional teaching cards. It has the kids, when you print them out, it has the kids lined up where they fall according to the last checkpoint. Then it gives you questions off of there: If this child is in this area, these might be the questions you might want to ask them while doing this small group.

Another teacher remarked on the user-friendliness of the online tools, saying,

This curriculum, with it all being online, it has gotten a lot easier in planning because if you take, like, the clothes study, you pick it on the computer, and then it inserts it into the day for you. For the most part, it's like written out for you, but you can pick your small group activity and then you just pick that and it's right there for you. So I think this curriculum out of all of them--I don't know about the curriculum if I like it that much, but the part of putting it on the computer is really convenient and helps out a lot.

The teachers remarked that certain reports, especially those that provide visual representations of a child's development level within each of the developmental domains, were helpful to quickly determine a child's areas of need and what to teach. One teacher with more than 17 years of experience noted, "I think all authentic assessment strategies work even if it is only for a brief time. When it seems as if they are not working, I feel that it's because the dynamics of society, home, or school has altered that."

Including Parents in the Authentic Assessment Process

National early childhood associations specify the importance of including parents in all aspects of the authentic assessment process (NAEYC & NECS-SDE, 2003; NRC,

2008). Parents have intimate knowledge of their children's skills and abilities, in multiple settings. The Head Start teachers were asked how, if at all, they include parents in the authentic assessment process. Most admitted that they rarely include parents in the collection of assessment data, which aligns with their self-reported scores on the rating scale. They reported that parents are not aware of developmental levels and that they typically overestimate their child's abilities, which does not support the intent of authentic assessment. One teacher said, "I don't think parents are accurate a lot of times. They're accurate on some things." Another stated,

And parents don't have--you can ask them, and they only know this many letters of the alphabet--well, they know all their ABCs. Well, yeah, they can sing their ABCs, but they don't specifically know that this is an A, this is a B. They can sing it for you, but they don't know.

One teacher, however, specifically said how important it is to include parents in capturing assessment data because parents know what is going on at home and teachers often do not. She stated, "It's a good tool, too, to get the information from the parents, get their observations and their inputs because that helps us, too, as teachers in the classroom."

Three teachers discussed the importance of engaging parents in their children's learning. They shared their belief that parents are the children's primary teacher. One teacher said,

Some parents don't realize where their kids are at, and some parents also think that school is the place for all of the learning. That's your job is to help them. Sometimes you can show parents this is where they're at. We're helping them as much as we can at school, but we could really use your help with this at home, so they're taking that part of it away from it, too, I think.

Early educators also reportedly pay close attention to how assessment data are shared with parents. The teachers agreed that they all modify the parent reports created by the online assessment system. They reported that the assessment reports include technical jargon, such as specific assessment indicators, which they feel are off-putting to parents. About sharing assessment results with parents, one teacher said,

So now I think it all just kind of gets summarized. Look at the skill update for the thing, and that's what the parents can understand--oh, letters, numbers. Then the social emotional part, you're just talking about how you see their child just in general. It's not, "Oh, according to this objective, they are able to interact with 2-3 children, enter the group and join in." It's like "Oh yeah, they play with their friends and different kids. They can sit on the rug and they can listen to the story." It's more broad about how they're doing. More parent friendly.

Summary of Research Question Two

Teachers rated themselves on the extent to which they employ 19 specific authentic assessment skills. The majority of teachers reported that they use most of the skills (e.g., multiple methods of observing children in the natural environment, lesson planning, individualizing instruction, etc.) "to a great extent." The items on which the teachers rated themselves the lowest were their knowledge of early learning standards (i.e., Early Childhood Indicators of Progress) and the extent to which they gather assessment data from parents.

All teachers identified quality observations as the most important aspect of authentic assessment. They reportedly rely heavily on the observations to know the developmental level of each child within their care and to inform their instruction for those children. Using the collective data they gather to modify instruction was also cited as a critical component of the authentic assessment process.

When asked about the most effective strategies for implementing authentic assessment, teachers responded with distinct methods for collecting observation data (e.g., self-designed checklists, notebooks, post-it notes, iPad, etc.). Teachers discussed their desire to have greater opportunities to share these strategies within and across Head Start programs.

The early educators primarily use authentic assessment data to individualize instruction. They also use the data to note where they need to improve their instruction in any of the five domains for the group as a whole.

Teachers stated that engaging parents in teaching their children was part of their work. They also, however, stated that they rarely engage parents in authentic assessment data collection. Teachers share the results of authentic assessment during parent teacher conferences and modify reports to ensure that the reports are parent-friendly.

The results presented in this section point to the complexity of authentic assessment and how Head Start teachers deal with the multiple expectations they face. Teachers understand the time and attention quality authentic assessment necessitates. They also appreciate the information they get from authentic assessment and how it helps them individualize their instruction to improve school readiness for children.

The final chapter discusses the results in detail. Potential impacts of the results on the early childhood assessment research base and on policy are offered. Limitations to the research are identified. Recommendations are presented, as are ideas for future research studies.

CHAPTER 5: DISCUSSION AND IMPLICATIONS

A growing body of research on early childhood authentic assessment has documented its importance in developing and implementing high quality curricular and instructional practices, making it imperative that we understand what teachers know and do to implement authentic assessment consistently and correctly (Akers et al., 2015c, Bagnato, 2007; Bagnato et al., 2010; Morrison, 2017). Up to this point, research on authentic assessment has focused on the assessment process and on what teachers should do, rather than on what teachers actually do in practice. This study investigated the authentic assessment practices of Head Start teachers and the extent to which authentic assessment guides the planning and implementation of curricular and instructional practices.

The purpose of the study was to gather information on what early childhood educators know about authentic assessment, how they use the results of assessment to inform their instruction, what components of authentic assessment teachers find most important to implementation, and what strategies teachers use to implement curriculum and assessment. Two research questions guided the study: (1) What teacher knowledge, skills, and strategies influence the successful implementation of curricula and authentic assessment within an early childhood educational environment; and (2) What components (i.e., observation/data collection; data analysis; data interpretation; hypothesis development; modify/implement individualized instruction based on the assessment data; reporting) of the assessment cycle are perceived as having a greater likelihood of improving instruction and outcomes for young children?

The design of the study used a mixed methods approach, with both qualitative and quantitative methods, including interviews, focus groups, and a rating scale. A discussion of the findings and themes that emerged is presented in this chapter. These themes, based on the study methods, identify and describe what early educators reportedly know, practice, and value when it comes to authentic assessment and individualized instruction. Results also suggest implications for future research and policy. The organization of the chapter is as follows: discussion of the key findings in terms of what can be learned from them to guide future practice; limitations of the study; implications for research and policy; and conclusion.

Summary of Findings with Discussion

Discussion of Research Question One

Interviews and focus groups were used to address the first research question. Research question one asked: What teacher knowledge, skills, and strategies influence the successful implementation of curricula and authentic assessment within an early childhood educational environment? A total of nine themes were identified through these methods: 1) teachers' lack of knowledge of learning standards, 2) teachers' ongoing professional development needs, 3) teachers' use of formal and informal assessment strategies, 4) teachers' knowledge of curriculum and authentic assessment, 5) teachers' understanding of effective strategies for implementing curriculum, 6) teachers' challenges to implementing the curriculum, 7) teachers' use of specific authentic assessment skills, 8) teachers' challenges to implementing authentic assessment, and 9) teachers' needs for support to implement curriculum and authentic assessment. Of these nine themes, the first three themes listed were unique findings to the early childhood

authentic assessment research base (i.e., teachers' lack of knowledge of learning standards, teachers' ongoing professional development needs, and teachers' use of formal and informal assessment strategies). These three themes are discussed in greater detail than the other identified themes.

Teachers' Lack of Knowledge of Learning Standards

Early learning standards and K-12 learning standards were developed with the intent to define what children should learn at different ages and grade levels (Daily et al., 2014; Kagan, 2012; Scott-Little, Cassidy, Lower, & Ellen, 2010). As such, knowledge of what young children should know and do at different ages is essential to providing quality early childhood programming. Kagan (2012) specified that early learning standards should be used “. . .not simply as a basis for discerning what students show know and be able to do, standards for students can drive what teachers should know and be able to teach, thereby influencing the content of teacher preparation and potentially even teacher certification” (Kagan, 2012, p. 65)

The early educators acknowledged that they know about the early learning standards, however, they rarely apply these standards in practice. They also reported that they learned about the K-12 standards in college, but that they have not seen or used them since. If quality implementation of curriculum and assessment is based on teachers' knowledge of the scope and sequence of child development, then the lack of knowledge and use of learning standards becomes problematic. It becomes even more problematic when there are children participating in the program who do not follow typical developmental trajectories (e.g., children with disabilities, children who are gifted, children who culturally and linguistically diverse families). The teachers were aware that

the curriculum used within their local program aligned with standards. They were not, however, aware of how well the curriculum and assessment tools used within their program align with Minnesota’s early learning standards. Further, they were not aware of the recent revisions to Minnesota’s Early Childhood Indicators of Progress (i.e., early learning standards) or that the revised document now references development from birth to age five rather than two different documents—one for preschoolers and another for infants and toddlers.

Snider and Fu (1990) found that teachers’ knowledge of developmentally appropriate practices was related to the teachers’ college degree, the number of child development courses taken, and to the interaction between content knowledge and opportunities to practice what they learned through their coursework. They also found that hands-on experience without specific training on child development did not increase a teacher’s understanding of developmentally appropriate practice. Early learning standards must be included in both pre-service and in-service professional development. Part of that training should also demonstrate to teachers how the curriculum and assessment align (or do not align) to the state’s early learning standards. Scott-Little et al. (2010) stated “. . .program improvement efforts, program standards, and the use of ELS [early learning standards] should go hand in hand, and when they are consistent or aligned with one another, the efforts to improve programs are strengthened and children and families are better served” (p. 70).

Teachers’ Ongoing Professional Development Needs

The teachers overwhelmingly agreed that the professional development they receive from their individual Head Start programs and the Minnesota Head Start

Association is critical to their ability to do their jobs effectively. They stated that the ongoing professional development offered to them has greater value and impact on their work compared to what they learned in their college coursework. Kagan et al. (2008) recommended that professional development must be an integrated system between formal education and training to maximize results for early educators.

The teachers noted that most of their professional development was on a single topic provided over the course of one day or half of one day. Ball and Cohen (1999) stated that one-time professional development opportunities are “intellectually superficial, disconnected from deep issues of curriculum and learning, fragmented, and noncumulative” (pp. 3-4). Just as it is developmentally appropriate to scaffold instruction for young children, it is also appropriate to scaffold professional development on curriculum and authentic assessment for early educators. An integrated and sequenced professional development system would support effective instruction for all teachers, no matter their experience level. Yoon, Duncan, Lee, Scarloss, and Shapley (2007) reported that for school-aged teacher professional development to improve academic outcomes for students, the programming needed to last a minimum of 14 hours. There are no reasons why this would not also be true for early childhood teachers. “Professional development affects student achievement through three steps. First, professional development enhances teacher knowledge and skill. Second, better knowledge and skills improve classroom teaching. Third, improved teaching raises student achievement. If one link is weak or missing, better student learning cannot be expected” (p. 4).

Providing high quality professional development is not enough to change teacher behavior. A formal evaluation of the professional development offered is necessary to

maximize its impact on teachers and children. Guskey's (2002) framework for evaluating professional development for educators identified five critical levels: Level 1: Participants' reactions; Level 2: Participants' learning; Level 3: Organizational support and change; Level 4: Use of new knowledge and skills; and Level 5: Student learning outcomes. Accurately measuring each step of the professional development is essential, given that each step of this framework builds on the previous level. Evaluation of the professional development in this manner allows early care and education administrators to make informed decisions about what the teachers need to improve their practices and, in turn, improve the children's readiness for school.

Teachers' Use of Formal and Informal Assessment Strategies

The majority of research on early childhood assessment focuses solely on the "formal" side of the process—the formal cycle of authentic assessment where teachers plan, collect data, analyze data, modify instruction based on the data, and report findings to parents and administrators. The teachers within this study discussed implementing authentic assessment in this manner and also in a more "informal" manner, where they make instantaneous decisions about what a child knows and needs to learn through the typical daily interactions (e.g., at the bus stop, during play in the classroom, on the playground, in the bathroom, etc.). Glaser (1977) referred to this as "matching" where the teacher makes quick decisions about the child's skill level and level of knowledge and identifies—or matches—the appropriate instructional activity.

Stipek and Byler (1997) pointed out that teachers make numerous, split-second decisions every day within their classrooms for multiple children who vary in their development skill level. These teachers make decisions about what to teach, how to

teach, who leads activities (e.g., teacher-led or child-led), classroom management, and more. They also found that teachers' beliefs about the goal of preschool influenced the focus of instruction. If teachers believed that the goal of preschool is to get children ready for kindergarten, then the teachers focused on basic skill development (e.g., early literacy, early numeracy). If, instead, teachers believed that the goal of preschool was to help children develop self-confidence, problem-solving skills, and an eagerness to learn, then their instruction focused more on developing prosocial skills rather than on academic content. The teachers in this research reporting using their knowledge of and experience with young children and their development to make in-the-moment decisions about instructional practices. They adapt their lesson plans and instructional practices, as needed, to ensure that all children are learning and engaged in the instruction. These teachers believed that the informal assessment they do every day is as, if not more, important than the formal assessment they do three times per school year. If this is true, then early childhood programs need to modify their professional development (i.e., focus on early learning standards) and teacher supports (e.g., coaching) to enhance teachers' skills with informal assessment.

Teachers' Knowledge of Curriculum and Authentic Assessment

Quality authentic assessment is directly linked to early childhood standards, curriculum, and individualized instruction (Riley-Akers, 2014). When asked to report on their own levels of knowledge, teachers reported high levels of knowledge with both the curriculum and authentic assessment. The teachers' ratings of their own curriculum and assessment knowledge mirrors the findings in other research where teachers were asked to report their levels of knowledge (Banerjee & Luckner, 2013; Susman-Stillman et al.,

2014). Burchinal, Peisner-Feinberg, Pianta, and Howes (2002) found a direct connection between teachers' knowledge and education levels and the quality of care they provide. To put it simply, teachers who know more, do better, which results in improved outcomes for young children (Burchinal et al., 2002). Pianta (2006) suggests that measuring teacher knowledge be part of a larger, connected professional development system that includes conducting classroom observations as a check for quality interactions and instruction.

The teachers in this study were able to describe both the process of authentic assessment and how the results of assessment influence instruction. Their knowledge of the purpose of authentic assessment was evident in their responses to both interview and focus group questions. Teachers also reported on the extent to which they use 19 different authentic assessment skills, where they also rated themselves high on all but two items: use of early learning standards, and working with parents to gather authentic assessment data.

Katz (1996) suggested that teachers who act with confidence about their knowledge tend to be more intentional and clear with children and that those who lack that confidence “. . .may give many children mixed signals about what is expected of them. . .” (p. 145). The confidence in knowledge can be explained by the educational and practical experience of the teachers who participated in this research. The teachers in this research had, on average, at least 10 years of teaching experience and nine of the teachers had bachelor's degrees.

Teachers' Understanding of Effective Strategies for Implementing Curriculum

All teachers reported using the same strategy—developing small groups of children based on age or abilities—to implement the curriculum. This is one of the most commonly recommended strategies for individualizing instruction in early childhood programs (Bredekamp, & Copple, 1997; Kostelnik, Soderman, & Whiren, 2007; Wortham, 2009). Teachers also reported working with individual children who may need more intensive instruction. Eisner (1985) stated that curricula must include opportunities for teachers to share content and opportunities for children to build the cognitive skills necessary to be successful in school. The teachers in this study reported confidence that the individual child and small group strategies they use to implement the curriculum are effective.

Teachers' Challenges with Implementing the Curriculum

Teachers reported one major barrier to implementing the curriculum. These teachers noted that the curriculum used at their local program limited their ability to individualize instruction and develop creative ways to engage children. These teachers wanted to use their own knowledge and experience with child development and culturally-appropriate practice, in addition to the tools provided with the curriculum, to teach children in their classroom. They noted that they serve children with diverse backgrounds and needs (e.g., children with disabilities, children who are English language learners, children who live in poverty) and the curriculum does not allow for modifications that reach all children.

This finding aligns with previous research (Kagan & Kaurez, 2007; NAEYC 2009; Ritchie, Maxwell, & Clifford 2007) that reported that early childhood

accountability efforts have led to the removal of teacher individuality for the sake of attempting to standardize instruction. Charlesworth et al. (1993) reported that teachers develop their own ideas, based on experience and knowledge, about how best to teach the diverse children within their care. They also noted, however, that despite strong beliefs in the use of developmentally appropriate practices, teachers are often inconsistent in their use (Charlesworth et al., 1993). NAEYC's (2009) position statement on developmentally appropriate practices for children ages birth to age eight includes suggestions for high quality professional development that, if implemented correctly, would allow for greater levels of teacher creativity and individualization with instruction.

Teachers' Use of Specific Authentic Assessment Skills

Successful implementation of assessment practices have been defined as the following: early educators who clearly identify and write specific, measurable observations; the collection of meaningful data on individual children's behaviors in natural environments; use of the data to inform and influence curricula and lesson planning; and the provision of feedback to stakeholders—especially parents—regarding the results of the assessment (Bagnato et al., 2010; Bredekamp & Copple, 1997; McLean et al., 2004; Morrison, 2017; NRC, 2008; Sandall et al., 2000). The data presented in this dissertation would suggest that in addition to the skills listed above, the teachers need their own, practical strategies for capturing the data. The teachers in this study used self-made checklists, notebooks that contained observation notes, post-it notes, video recordings, and audio recordings to capture what a child knows and can do.

The teachers noted that they wanted opportunities to share strategies and shortcuts for conducting authentic assessment with other teachers in their own local program and

with other early care and education providers. The Minnesota Head Start Association hosts a “Quality Assessment Group” that meets regularly to discuss issues related to authentic assessment (G. Kelly, personal communication, September 22, 2015). This group could provide an online forum for teachers to share information, in addition to offering opportunities to share at the meetings.

Teachers’ Challenges to Implementing Authentic Assessment

The Head Start teachers who participated in this research cited time—time to collect assessment data and time to input the data they collect—as the greatest barrier to implementing authentic assessment. The teachers also identified assessing children who have disabilities and those who are English language learners as difficult. These results align with results from other research on early childhood assessment (Banerjee & Luckner, 2013; NRC, 2008; Scott-Little et al., 2010; Susman-Stillman et al., 2014). Knowing that time is the greatest barrier to implementing authentic assessment should help early childhood administrators develop explicit supports for teachers around authentic assessment. This could include having an authentic assessment specialist or other knowledgeable administrator offer in-class support during the formal assessment periods. Offering teachers time to share strategies to make authentic assessment easier may also decrease this barrier to implementation.

Teachers’ Needs for Support to Implement Curriculum and Authentic Assessment

The Head Start teachers identified wanting ongoing coaching and more classroom supports for implementing authentic assessment. Research supports the use of coaching as an effective way to improve instructional skills of teachers and student outcomes (Cantrell & Hughes, 2008; Carlisle & Berebitsky, 2011; Shidler, 2009). According to

Joyce and Showers (2002), when staff development includes coaching, the level of content application is around 95%. Shidler (2009) suggested that there are four specific components to effective coaching, including 1) coaches who are knowledgeable and can provide coaching specific to the content; 2) the ability of the coach to physically demonstrate different instructional practices; 3) time to observe the teacher using the instructional skills; and 4) time for the coach and teacher to reflect on the content and the implementation of the content. Providing teachers with coaches who are knowledgeable about child development, early learning standards, strategies for efficient data collection, assessment data analysis, and how to include parents in the process would improve the authentic assessment process. Having regular interactions with a coach would also provide teachers with opportunities to practice the skills they need and reflect on what they learn through professional development.

Discussion of Research Question Two

Research question two asked: What components (i.e., observation/data collection; data analysis; data interpretation; hypothesis development; modify/implement individualized instruction based on the assessment data; reporting) of the assessment cycle are perceived as having a greater likelihood of improving instruction and outcomes for young children? To answer this question, four themes were identified: 1) importance of observation, 2) teacher perception of the most effective strategies for implementing authentic assessment, 3) teachers' use of authentic assessment data; and 4) including parents in the authentic assessment process. The first three themes are well-founded within existing early childhood authentic assessment literature. The finding, "Including

parents in the authentic assessment process,” adds distinctive, further evidence to the early childhood authentic assessment field.

Including Parents in the Authentic Assessment Process

Despite the recommendations by early childhood organizations, such as the National Association for the Education of Young Children (NAEYC) and the Division of Early Childhood (DEC), to include parents in all parts of the authentic assessment process, the Head Start teachers in this study acknowledged that they rarely include parents as active participants in the authentic assessment process. The teachers reported using parent-teacher conferences to share assessment results and discuss child development with families, however, the teachers did not have specific strategies for including parents in other parts of the process.

Sheehan (1988) found that early childhood professionals avoid including parents in the assessment process because parents lack objectivity regarding their child. He also noted that educators see assessing young children as a specialized set of skills that they have and parents do not. On the other hand, Henderson and Meisels (1994) found that parents can provide unique information that often gives the teacher a more complete picture of a child’s development. Brink (2003) recommended that early childhood professionals explain the assessment process, review the authentic assessment tool, and allow time for questions by parents so that they understand its purpose and its use within the classroom. It may be that teachers need training on specific language and methods for explaining the process and involving parents with the components of the authentic assessment process, including planning for assessment and data collection.

Importance of Observation

When asked to name the most important aspect of the authentic assessment process, all teachers identified observation of children's behaviors and interaction. Observations can serve multiple purposes within a preschool classroom. They can be used to identify a child's strengths and areas of need. They can also be used to measure the quality of the educational environment, including teacher-child interactions (NRC, 2008). Reifel (2011) stated that teachers benefit from observations. Teachers benefit by getting to know children better, improving their observational skills, and improving the manner in which they document their observations. "Observation is necessary for teachers' understanding of children, but developing the skills to think about what teachers observe and to integrate their reflections in their teaching are what lead to the planning that supports children's learning (Reifel, 2011, p. 64).

Bagnato et al. (2010) recommended that teachers' observation processes be regimented. Teachers should follow the same set of observational methods while conducting authentic assessment. By doing this, teachers will enhance their own skills and define when and how parents can contribute to the process.

Most Effective Strategies for Implementing Authentic Assessment Practices

The teachers in this study identified several strategies that they use to make conducting authentic assessment easier for themselves. Teachers reported using checklists they developed, as well as checklists created by the authors of the curriculum and assessment tools. Teachers also reported using technology—iPads and iPhones—to capture video and audio recordings that can later be uploaded to their online assessment system as evidence. Akers et al. (2015b) stated, "Recommended practices in assessment

are discussed in the literature and incorporated in different studies, but individual practices used in ongoing assessment are not studied separately” (p. 2). The results of this study add to the research surrounding actual assessment practices. Based on the reported lack of knowledge with early learning standards, teacher-created checklists and other content used in authentic assessment should be reviewed for accuracy. There is still a great need to follow-up this work with more in-depth research on what authentic assessment strategies work most efficiently and effectively and what strategies have the best chance of improving young children’s readiness for school.

Teachers’ Uses of Assessment Data

Similar to findings from previous research (Akers et al., 2016b; Bagnato et al., 2011; NRC, 2008), the teachers in this study predominantly reported using authentic assessment data to modify the individual instruction they provide to children. The teachers also acknowledged that they use the assessment data to inform the group instruction they provide. Since establishing school readiness is the primary function of conducting early childhood authentic assessment, the teachers reportedly know and use the data appropriately. Ongoing professional development, specific to the authentic assessment tool used within each program, is essential to this knowledge and use.

Limitations

There are several limitations to this research. First, all data collected were from teachers who self-reported. No additional data were collected to either support or contradict the findings. Observational data collected on teachers’ authentic assessment practices would minimize this concern. Second, the size of the sample was small (n = 13 for interviews; n = 12 for focus groups) and homogenous. The 13 teachers who

participated in the interviews were all women who have been lead teachers in Head Start, on average, for more than 10 years. Ten of the 13 teachers identified themselves as white and 11 of them are native English speakers. The participants represented three out of 34 Head Start agencies throughout Minnesota, and none of them were from the Twin Cities metropolitan area. The diversity of the children being served in Head Start is representative of the communities in which they live. The lack of diversity among lead teachers may have resulted in biased responses, which may not represent the larger Head Start teacher population within Minnesota.

Additional limitations related directly to researching only those who are lead teachers in Head Start program. First, Head Start has had a requirement to assess all children in their program since its 1998 reauthorization (Children's Defense Fund, n.d.). Second, Head Start provides ongoing professional development and coaching on all of its educational programmatic requirements, including child development, curricula, and assessment (USDHHS/ACF, 2013). Finally, the three Head Start programs who participated in this research all use the same curriculum and the same assessment tool. Early educators who use different assessment tools may have developed different skills that are unique to the implementation of their specific assessment tool. The teachers also have access to an online version of this assessment tool that analyzes data and creates reports for the teachers to share with supervisors and parents (G. Kelly, personal communication). The homogeneity among programs and assessment tools, the long-standing history of assessing young children, and the availability of ongoing professional development and support for implementing assessment may also be seen as a strength

of this research. The results may represent the majority of Head Start teachers within this state and possibly in other states as well.

The process of data coding also has the potential to be influenced by researcher's biases and perspectives. The language used to develop the protocols, as well as what is used for coding and previous research experience are just some examples of how researcher bias can impact theory development (Charmaz, 2014). Patton (1999) suggested that one way to mitigate biases is for the researcher to be aware of any potential biases, as well as by looking for codes and themes that may be antithetical to what has been proposed within the research. Collecting additional data from early care and education environments outside of Head Start may help alleviate this limitation.

Implications for Policy and Practice

The results of the research presented have implications for policies related to the professional development. Early childhood programs must provide regular, consistent professional development that includes opportunities for educators to share what they know with their peers, opportunities to reflect on what they have learned, opportunities to renew their knowledge of standards, opportunities to incorporate standards into assessment, and opportunities to practice new skills prior to implementing them in the classroom. Riley-Akers (2014), in a meta-analysis of assessment research, determined a similar conclusion. She stated,

For formative assessment systems to be successful, teachers need training in child development, a strong understanding of what typical development for the age group looks like and support to become adept at collecting classroom-based data, judging a child's progress, and using that understanding to improve their teaching practices. Teachers also need direct training and support in how to implement any specific assessment approach or tool. (p. 9)

Implementation of these types of professional development—reflective, skill-building, and developmentally appropriate opportunities—is dependent first on knowledgeable and organized leaders. These leaders must understand how to create professional development activities that allow practitioners to build their skills onsite, with support from coaches and mentors; that allows time for reflection and sharing of those reflections by a skilled and knowledgeable facilitator; and that incorporates the most recent research and aligns with the state’s early learning standards.

Wood and Bennett (2000) suggested that early childhood professional development be a three-stage process where teachers first have the opportunity to reflect on what they have learned and discuss how theory can be tied to practice. Stage two should include the opportunity for teachers to “problematize their practice” (p. 645), so that they can proactively determine what might be barriers to implementing the content they have learned and how to solve the perceived problems. The third stage requires teachers to have the “opportunity to engage in in-depth reflection in a supportive context with knowledgeable others who shared similar interests and were able to offer different perspectives” (p. 646). Future professional development on authentic assessment and individualizing instruction would benefit from following these three stages. It is not enough to simply provide ongoing training. The training must be based on and tied back to early learning standards, evaluated for quality of content and use, and offer teachers the chance to discuss and practice what they have learned (Hyson & Whittaker, 2012).

The results of this research also may influence policies related to the use of early childhood standards. Kagen (2012) noted that although the use of early childhood standards encourages educational equality and common expectations for all children, they

can also be misused in practice thereby creating inequalities and lowering expectations of children. Before disseminating standards to practitioners, early childhood administrators should study their state's early childhood standards and ensure that the standards align with the curriculum and assessment being used within the program. Next, professional development on those standards should be provided to teachers. This ongoing professional development must include opportunities for teachers to measure alignment between the standards and the curriculum, opportunities and time to practice how to use the standards to inform instruction, and time to reflect on the use of early learning standards within the classroom.

The results also have influence on policies that guide coursework offered by institutes of higher education. Early and Winton (2001) found that most of the college-level early childhood programs attempt to cover a large swath of development (e.g., birth to age eight) and do not delve deeply enough into specific age groups (e.g., infants and toddlers, preschool) for students to gain the level of knowledge necessary to enter the workforce. Quality assessment and instructional practices are dependent on teachers having a comprehensive knowledge of child development. Head Start preschool teachers must know what typical child development looks like at ages three, four, and five to accurately assess the children within their care. Colleges, especially community colleges, must work in conjunction with early childhood program administrators to offer the coursework necessary for teachers to gain the knowledge and skills they need.

Implications for Future Research

In their review of early childhood assessment literature, Akers et al. (2015a) found that there is a large gap in the research regarding how teachers conduct and use

authentic assessment. The results presented within this dissertation add to that literature. The results, however, also lead to additional questions about teachers' actual implementation of curriculum and authentic assessment. Do these results apply to other early care and education settings? Glaser and Strauss (1965) stated that using grounded theory requires multiple points of data collection and moments to reflect on the existing data to formulate an accurate theory. They also suggested that in its final stages, data collection aids in either confirming or enhancing what the researcher already has identified as the situation at hand. A limitation of the current research is that this was restricted to a point in time data collection method, using interviews and focus groups within three Head Start programs in Minnesota. Additional data must be collected from other Head Start programs throughout the state, in rural, suburban, and urban areas, as well as from other early childhood programs (e.g., family childcare, school-based programming, center-based childcare) that may not require the use of authentic assessment. Then, the additional data can be compared to these baseline data to determine if the findings from this study are sound. Do teachers practice what they say they know? Additional research must also include direct observation of early educators conducting authentic assessment and comparing the direct observation to their self-report of assessment practices. Observing teachers practice their skills within the classroom is the only real way to understand if greater knowledge leads to behavioral change.

Riley-Akers (2014) suggested that early childhood authentic assessment is an area where policy has taken the lead and empirical research on the topic has been an afterthought. The field of early care and education must invest in more research on

teacher knowledge and actual implementation practices to improve the authentic assessment system and improve outcomes for young children.

Recommendations

This research addressed multiple, identified problems within the realm of early childhood assessment. First, there is a large body of research that demonstrates some children are not coming to school ready to learn. Second, although research does support the use of assessment to support child development, there is little research on what early childhood educators know and believe about early childhood assessment. Finally, there is no research on the specific knowledge and skills that early educators must know to implement assessment with fidelity.

The results presented in this dissertation provide guidance to Head Start and other early care and education programs on how best to support the implementation of early childhood curriculum and authentic assessment. Early educators need a professional development system that is tiered, like any other Multi-Tiered System of Support (MTSS). A typical, school-aged MTSS framework is designed to meet the academic and behavioral needs of all students through the use of a continuum of instructional and behavioral supports and targeted, evidence-based interventions of increasing intensity matched to student need. Tier 1 of an MTSS contains universal, research-based instruction that is intended to support the needs all students. Tier 2 provides extended, research-based information, as well as specific curriculum and instructional supports that are targeted to those students who have been identified with needs that are not being met by the information and practices provided in Tier 1. Tier 3 encompasses the most intensive evidence-based information and instructional supports. Tier 3 is intended for

those few students who have not responded to the instruction provided within the other two tiers. As MTSS frameworks, both Response to Intervention and Positive Behavioral Interventions and Supports feature: (a) universal screening, (b) data-based decision making and problem solving, (c) continuous progress monitoring, (d) a continuum of evidence-based practices, and (e) a focus on fidelity of implementation (McIntosh & Goodman, 2016).

Blasé (2009) suggested that technical assistance networks would benefit from organizing their services using an MTSS framework. She argued that technical assistance (TA) may fall into the following three categories: “basic TA,” “blended intensive and basic TA,” and “intensive TA” (Blasé, 2009, p. 3). She also stated that as information and support move up the pyramid from basic technical assistance to intensive technical assistance, so does a technical assistance system move from individual changes in knowledge and attitudes to actual change within a system.

The TA MTSS framework should also be used to develop an early childhood professional development system specifically on curriculum and authentic assessment. Just as child development is organized by scope and sequence, so, too, should professional development on curriculum and assessment. As described above, Tier 1 would contain the foundational information on curriculum and authentic assessment that all teachers must know. Professional development for Tier 1 should focus on the purpose of authentic assessment, the process of authentic assessment, what that process looks like in practice, and what defines quality implementation. The evidence base demonstrating how intricately linked curriculum, authentic assessment, and early learning standards are is critical to Tier 1 professional development. Tier 1 should also include the basics of

how to implement authentic assessment within a classroom. The “how-tos” should focus on planning for assessment, including effective strategies for implementation; using the program’s chosen assessment tool; conducting assessment on all children, including those who have disabilities and those who are English language learners; collecting all types of data; writing appropriate, detailed observations; analyzing authentic assessment data for patterns and themes; modifying and individualizing instruction for all learners; and including families in all aspects of the process.

Tier 1 should also include in-depth content on and practice with the early learning and kindergarten standards. Early educators can benefit from a professional learning community (PLC) specifically on the topic of early learning standards and how it relates to the program’s chosen curriculum. Many curriculum and assessment tool vendors have developed “crosswalk” documents that explain how a given state’s standards map onto their curriculum and assessment tool. As part of the PLC, administrators, coaches, and teachers can analyze the accuracy of the vendor-provided crosswalk or create their own version.

Tier 2 of the curriculum and authentic assessment professional development system should build on the information provided in Tier 1. Early educators who are new to the field (i.e., less than three years’ experience as a lead teacher) and those who have been identified as needing additional implementation supports are the intended audience for Tier 2 interventions. This tier should include a mentoring/coaching component so that the early educators get the feedback they need to improve their practice. Tier 2 should include more in-depth information on how to modify the curriculum to meet the needs of

specific children within the classroom (e.g., children with disabilities, children who are English language learners, and others who are identified as “at-risk”).

The interventions included in Tier 3 would be the most intensive and should be intended for those teachers who are new to the field (e.g., less than one year) or who have demonstrated the greatest need for support. Tier 3 interventions should include intensive coaching and modeling of appropriate authentic assessment and instructional practices.

Another option is to create a professional development system where Tier 1 contains all early childhood educators who participate in authentic assessment activities. Tier 2 would consist of those educators who, either through volunteering or through assignment from supervisors, learn more in-depth information and skills. These educators would act as “peer coaches” to their colleagues and provide authentic assessment support, when necessary. Finally, Tier 3 would contain two or three early childhood supervisors (e.g., the education coordinator, the disability coordinator, and/or a parent advocate, etc.) who are the most knowledgeable about high-quality early childhood authentic assessment practices and can act as mentors to those who struggle with its implementation.

Woven throughout all of the tiers must be opportunities for early educators to practice the skills they learn, reflect on what they have learned with their peers and other knowledgeable colleagues (e.g., content, education, or disability specialist), and get constructive feedback from a trusted and knowledgeable coach/mentor.

. . . PD [professional development] is more likely to positively affect learner outcomes if it is focused on specific content and/or instructional strategies rather than general content, is of considerable duration, is infused with active learning opportunities, is characterized by collective participation (e.g., team based), and

incorporates or is aligned with standards, curriculum, and assessments” (Winton, 2010, p. 118).

The results of this research support the development of this tiered system of professional development, which aligns with the definition of quality provided.

In addition to a tiered professional development system, teachers need to be observed by a knowledgeable and trusted coach/mentor. Regular observations of Head Start teachers implementing the curriculum and authentic assessment would provide greater insight into actual practices that support or inhibit quality instruction. Head Start programs currently assess student-teacher interactions, including instructional supports, via the *Classroom Assessment Scoring System*[™] (Pianta, La Paro, & Hamre, 2008). Tying in observations on authentic assessment practices to the CLASS data would make this feedback more comprehensive.

Finally, Head Start and other early care and education programs would benefit from instituting professional learning communities where instructional and authentic assessment data are reviewed and used to influence professional development offerings, as well as coaching and mentoring needs. Moreover, all early care and education programs would benefit from a formal coaching and mentoring system, especially for those early educators who are new to the program. The teachers in this study were clear that much of what they know about high quality individualized instruction and authentic assessment is gained through experience and onsite professional development than through formal coursework. Having experienced teachers support the learning and development of effective practices of new teachers benefits both the teachers and the children they serve.

CONCLUSION

The intent of this research was to determine what early childhood educators know about curriculum and authentic assessment and what skills they believe are most important to its implementation. For the first time, teachers were asked what they think are the most important components of curriculum and authentic assessment. They were also asked about the strategies they use that are most beneficial to the process and the barriers to implementation. Their responses produced thirteen different themes. Each of the identified themes provides awareness of what teachers know, what teachers do, and what they think is important about curriculum and authentic assessment. The Head Start teachers in this study were knowledgeable about authentic assessment and individualized instruction. They use authentic assessment both formally and informally to assess children's learning and modify their instruction. The teachers were less knowledgeable about early and K-12 learning standards, which causes concern as these standards describe what children should know and do at specific ages. A tiered professional system was recommended based on the findings from this research. This tiered system would provide teachers with professional development that meets their needs at any given moment in their careers. The results can be used by local programs and institutes of higher education to develop training and professional development opportunities that cater to the knowledge and concrete skill development early educators need to implement curriculum and authentic assessment effectively. Further research with a larger number of Head Start teachers and with early educators in other early care and educational environments is warranted.

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Appendix A: Assessment Skills Rating Form

For the following questions, please rate the extent to which you use these skills in your work.

Do you:

1. Create an evaluation file (paper or online) for each child?
 - a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all

2. Observe each student in the natural environment?
 - a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all

3. Record observations on each child
 - a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all

4. Use developmental checklists?

- a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all
5. Use video to gather assessment data?
- a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all
6. Use pictures to gather assessment data?
- a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all
7. Use the child's work samples as assessment data?
- a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all

8. Use the Early Childhood Indicators of Progress (ECIPs) as a reference tool?
 - a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all

9. Gather assessment data from parents/caregivers?
 - a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all

10. Review assessment data weekly?
 - a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all

11. Identify patterns of learning and behavior from the assessment data?
 - a. To a great extent
 - b. To a moderate extent
 - c. To a slight extent
 - d. Not at all

12. Identify children who are not meeting developmental milestones, based on assessment data?

- a. To a great extent
- b. To a moderate extent
- c. To a slight extent
- d. Not at all

13. Identify children who are exceeding developmental milestones, based on assessment data?

- a. To a great extent
- b. To a moderate extent
- c. To a slight extent
- d. Not at all

14. Use assessment data to develop lesson plans that address specific learning needs of children within the classroom?

- a. To a great extent
- b. To a moderate extent
- c. To a slight extent
- d. Not at all

15. Implement those lesson plans, as intended?

- a. To a great extent
- b. To a moderate extent
- c. To a slight extent
- d. Not at all

16. Observe the child after implementing the modified curriculum?

- a. To a great extent
- b. To a moderate extent
- c. To a slight extent
- d. Not at all

17. Review those observation data for changes in behavior?

- a. To a great extent
- b. To a moderate extent
- c. To a slight extent
- d. Not at all

18. Make adjustments to the instruction based on the additional data?

- a. To a great extent
- b. To a moderate extent
- c. To a slight extent
- d. Not at all

19. Document the results in an evaluation file?

- a. To a great extent
- b. To a moderate extent
- c. To a slight extent
- d. Not at all

Appendix B: Administrator Recruitment Letter

Dear *[insert name]*,

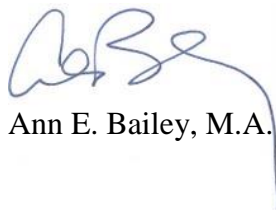
My name is Ann Bailey and I am a research fellow at the Center for Early Education and Development (CEED) at the University of Minnesota. I am also a doctoral student in the Organizational Leadership, Policy, and Development Department. I am writing to invite you and members of your staff to participate in a research study about quality authentic assessment practices. The results of this research will help determine current assessment practices, identify what specific strategies and skills lead to quality assessment, and inform assessment professional development. Participants in this research will be the first to receive the results. I am asking for your participation in this study because you lead a Head Start program within Minnesota and your teachers conduct authentic assessment in preschool classrooms for your Head Start agency. I obtained your contact information from the Minnesota Head Start Association website and Gayle Kelly.

If you decide to participate in this study, you, your education coordinator, and your disability coordinator will be sent a document with a series of questions on it. You will each be asked to consider those questions and develop a list of your staff based on your answers. You will return your list to me via email. Next, I would hope to interview those staff members, in person. The interview will take approximately 45 minutes to complete and the teachers will be given a \$15 Target gift card for their time. The interview will be recorded, in order for the interview to be transcribed and analyzed at a later date. Finally, once the interviews are complete, I hope to conduct a focus group with those teachers. The focus group would last less than 2 hours and the participants will each be paid \$25 for their time. The information gathered from the interviews and the focus group will be used to determine what authentic assessment practices and strategies are most successful at supporting the quality implementation of assessment. The results of this research are intended to support all early educators in implementing authentic assessment with fidelity. I would be more than willing to present the results to you and your staff at a time convenient to you.

Participation in this study is completely voluntary. You and your staff may choose to be in the study or not. If you'd like to participate or have any questions about the study, please email or contact me at baile045@umn.edu or 612-626-3724.

Thank you very much.

Sincerely,



Ann E. Bailey, M.A.

Appendix C: Teacher Recruitment Letter

Dear [*insert name*],

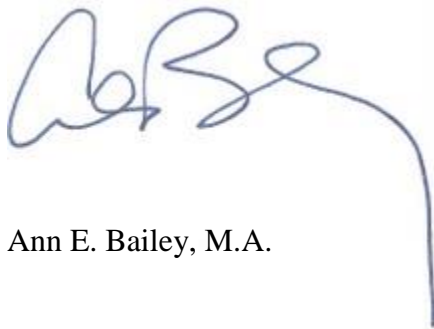
My name is Ann Bailey and I am a doctoral student in the Organizational Leadership, Policy, and Development Department at the University of Minnesota. I am writing to invite you to participate in a research study about quality authentic assessment practices. You're eligible to be in this study because you are a lead teacher within a Head Start classroom and you conducted authentic assessment within a preschool classroom for your Head Start agency within the last year. I obtained your contact information from the Minnesota Head Start Quality Assessment Group.

If you decide to participate in this study, you will be interviewed, in person, by me regarding your authentic assessment practices. The interview will take approximately one hour to complete and you will be given a \$15 Target gift card for your time. The interview will be recorded, in order for the interview to be transcribed and analyzed at a later date. I will use this information to determine what authentic assessment practices and strategies are most successful at supporting the quality implementation of assessment. The results of this research are intended to support all early educators in implementing authentic assessment with fidelity.

Remember, this is completely voluntary. You may choose to be in the study or not. If you'd like to participate or have any questions about the study, please email or contact me at baile045@umn.edu or 612-626-3724.

Thank you very much.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ann E. Bailey', with a long, thin vertical line extending downwards from the end of the signature.

Ann E. Bailey, M.A.

Appendix D: Consent Form

Building Quality Early Childhood Assessment

You are invited to participate in a research study on the quality instruction in Head Start preschool classrooms. You were selected as a possible participant because you are a lead teacher in a Head Start classroom. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Ann Bailey, M.A. from the Department of Organizational Leadership, Policy, and Development in the College of Education and Human Development at the University of Minnesota. This research is being conducted as part of the requirements for obtaining a Ph.D.

Study Purpose

The purpose of the study is to determine what skills and strategies have the greatest chance of positively impacting early childhood instruction.

Study Procedures

If you agree to participate in this study, you will be asked a series of interview questions about your instructional practices, knowledge, and training. The interview will last approximately 60 minutes and will be recorded for accuracy. You may also be asked to participate in a focus group that would last no more than 120 minutes. Similar to the interview process, you will be asked a series of questions in the focus group about early childhood instructional practices. You will be paid for your time.

Risks of Study Participation

There are no known risks to participating in the study.

Benefits of Study Participation

Participating in this study will further what is currently known about individual teachers' instructional practices, what strategies best support the implementation of quality instruction, and those attitudes and behaviors that make implementation difficult. This information will be used to both enhance professional development opportunities available to early childhood educators, guide those who provide professional development opportunities to early educators (e.g., university, college, and community college faculty, Head Start trainers, trainers from Think Small and Child Care Aware programs, etc.), and enhance individual educators' knowledge and skills with instruction.

Compensation

Each participant will receive a \$15 Target Gift Card for completing the interview and a \$25 gift card for completing the focus group. Gift cards will be given as soon as the interview is complete.

Confidentiality

The records of this study will be kept private. In any publications or presentations, we will not include any information that will make it possible to identify you as a subject. Study data will be encrypted according to current University policy for protection of confidentiality.

Voluntary Nature of the Study

Participation in this study is voluntary. Your decision whether or not to participate in this study will not affect your current or future relations with the University or with your employer. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

Contacts and Questions

The researcher conducting this study is Ann Bailey, M.A. You may ask any questions you have now, or if you have questions later, **you are encouraged to** contact her at 612-626-3724 or baile045@umn.edu. David R. Johnson, Ph.D., Professor and Coordinator of the Evaluation Studies Program within the Organizational Leadership, Policy, and Development program at the UMN is the advisor on this research. You may contact him at johns006@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged to** contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; [\(612\) 625-1650](tel:6126251650).

You will be given a copy of this form to keep for your records.

Statement of Consent

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature of Subject _____

Date _____

Signature of Person Obtaining
Consent_____

Date_____

Appendix E: Interview Protocol

Introduction

Good morning/afternoon. Thank you for agreeing to participate in this interview. My name is Ann Bailey. I am currently a research fellow at CEED, the Center for Early Education and Development at the University of Minnesota. I am also a PhD student in the Organizational Leadership, Policy, and Development program. The interview may take up to 60 minutes.

The purpose of this interview is to gather information on quality instructional practices within a Head Start classroom. Specifically, I'm trying to determine what strategies and skills best aid early educators in implementing curriculum and modifying instruction to meet the needs of children within your care. This information will be used by Head Start and me to potentially guide the development of professional development, as well as to determine how else we can support improved instruction within early care settings. You were invited to participate in this interview because you work for Head Start and work directly with children.

I encourage you to share your points of view. There are no right or wrong answers to the questions I will ask. Your answers to the questions will remain confidential, meaning that your individual answers will not be shared with anyone. The information gathered will be analyzed for themes and then shared with Head Start in the form of a report. There will be no identifiable information shared, meaning that your name will not be tied to your comments.

There are a few other items I'd like to review. First, I'll be recording this interview today to assist me in accurately capturing the conversation. You have the right to stop participating at any time during the interview with absolutely no penalty. Do you have any questions or concerns before we begin? Feel free to ask questions at any time.

1. What is your name?
2. How long have you been an early educator? How long have you been a lead teacher in this Head Start agency?
3. Please tell me about your educational experience.
4. What do you think makes you a good teacher?
5. Please describe any specific training you have had that you think helps you be a good teacher.
 - a. Was it in-person, online, or both?
 - b. Who provided the training?
 - c. Was it for college credit, CEUs, etc.?
6. How would you describe individualized instruction to someone who didn't know much about it? How would an outsider know that instruction was being used effectively in a preschool classroom?
7. What strategies do you use to make implementing the curriculum easier for you?
8. What strategies do you use to make modifying your instruction easier for you?

9. What instructional strategies have you tried that did not work? Why do you believe they were not effective?
10. What do you believe is the most important part classroom instruction? Why?
11. What, if anything, prevents you from implementing or modifying instruction?
12. What, if anything, do you wish you had known earlier in your career about improving instruction?
13. What additional support(s) do you still want related improving instruction in the classroom?
14. Is there anything else you'd like to add to the conversation?

Thank you for your participation.

Appendix F: Focus Group Protocol

Introduction

Good morning/afternoon. Thank you for agreeing to participate in this focus group. My name is Ann Bailey. I am currently a research fellow at CEED, the Center for Early Education and Development at the University of Minnesota. I am also a PhD student in the Organizational Leadership, Policy, and Development program. The focus group may take up to 90 minutes.

The purpose of our time together is to gather information on the use of authentic assessment within a Head Start classroom. Specifically, I'm trying to determine what strategies and skills best aid early educators in the implementation of assessment. This information will be used by Head Start and me to potentially guide the development of professional development, as well as to determine how else we can support the use of authentic assessment within early care settings. You were invited to participate in this group because of your previous responses to an interview.

I encourage you to share your points of view. There are no right or wrong answers to the questions I will ask. Your answers to the questions will not be identifiable and will only be shared in aggregate, meaning that no names will be tied to any individual responses. Ideally, your answers would remain confidential, meaning that your individual answers will not be shared with anyone outside of this group. The information gathered will be analyzed for themes and then shared with Head Start in the form of a report.

There are a few group rules that I'd like to review now. I'll ask that you either turn your cell phones off or on vibrate. I am recording the conversation today to assist me in

accurately capturing the conversation. I will ask that one person speaks at a time. Please be respectful of your colleagues and refrain from any side conversations. I'll also ask that people speak up so that we can capture your comments in notes and on the recorder and so that the other participants can hear your comments.

Please introduce yourself and tell me about your first concert.

1. Tell me about when you first learned of authentic assessment. What did you think?
2. How long have you been using authentic assessment in your work?
3. What kind of training on authentic assessment have you had? Describe.
 - a. Was it in-person, online, or both?
 - b. Who provided the training?
 - c. Was it for college credit, CEUs, etc.?
 - d. On approximately how many different authentic assessment tools have you had training?
4. How would you describe authentic assessment to someone who didn't know much about it?
 - a. When you do authentic assessment, what is the first thing you do? Take me through everything that you do.
5. How would an outsider know that authentic assessment was being used effectively in a preschool classroom?

6. How familiar are you with the Minnesota Early Childhood Indicators of Progress?
 - a. How important are they when planning instruction?
 - b. How often do you use them in your practice?

7. How familiar are you with the Minnesota K-12 Core Learning Standards?
 - a. How important are they when planning instruction?
 - b. How often to you use them in your practice?

8. Please take time to complete this rating form. Once you've completed the form, pass them to me.

9. Which of these strategies do you find most effective/helpful? Why?

10. What authentic assessment strategies have you tried that did not work? Why do you believe they were not effective?

11. What do you believe is the most important part of the authentic assessment process? Why?

12. What, if anything, prevents you from conducting authentic assessment consistently?

13. What, if anything, do you wish you had known earlier in your career about authentic assessment?

14. How often have you sought support for conducting authentic assessment?
 - a. Was the support helpful?
 - b. Was the support timely?

15. What additional support(s) do you still want related to authentic assessment and its implementation?

16. Is there anything else you'd like to add to the conversation?

Thank you for your participation.

Multi-Tiered Systems of Support (MTSS) in implementing the evidence-based practice.

MTSS is a “prevention framework that organizes building-level resources to address each individual student’s academic and/or behavioral needs within intervention tiers that vary in intensity” (Center on Response to Intervention at American Institutes for Research, 2013, p. 6).