BUSIO, DIONNE SILLS, Ph.D. The Impact of Pedagogical Documentation on the Individualizing Practices of Early Educators Serving Young Children with Disabilities in Inclusive Settings. (2016)
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The purpose of this study was to examine the impact of pedagogical documentation on the individualizing practices of early educators serving young children with disabilities in inclusive settings. Pedagogical documentation is defined as a collaborative process between adults and children by which concrete examples of an individual child's thinking are observed, analyzed, interpreted, and then applied to extend the child's learning (Broderick & Hong, 2011; Goldhaber, 2007; MacDonald, 2007; Rinaldi, 2006). Qualitative methods were used to investigate changes to the interactional, instructional, and planning of individualizing practices of four early educators after they completed two online training modules and then implemented pedagogical documentation in their classrooms. Data on the participants' experiences and perspective were collected through observations, a survey, interviews, and field notes.

Results suggest four themes derived from the data defined the impact of pedagogical documentation on the individualizing practices of participating early educators, including (a) learning pedagogical documentation, (b) changes to teaching and learning behaviors, (c) relationship building, and (d) customization of inclusion and individualization. Results indicate participants credited pedagogical documentation with facilitating changes to their teaching practices and to the manner in which they individualized and included the child with disabilities. They reported that pedagogical documentation, specifically the collaboration and observation components of the process,

strengthened their relationships with and altered their perspective of the child. In addition, the early educators linked positive changes in the learning behaviors of the child to the child's participation in the process of pedagogical documentation. These findings affirm the utility of pedagogical documentation in supporting early educators' efforts to include and individualize for young children with disabilities. Implications for early educator professional development are discussed.

THE IMPACT OF PEDAGOGICAL DOCUMENTATION ON THE

INDIVIDUALIZING PRACTICES OF EARLY EDUCATORS

SERVING YOUNG CHILDREN WITH

DISABILITIES IN INCLUSIVE

SETTINGS

by

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To my family, Alessandro, Matteo, Ilaria, and Gianluca, without your love and support

this journey would not have been possible. I am forever in your debt.

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This dissertation, written by Dionne Sills Busio, has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

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CHAPTER I

INTRODUCTION TO THE STUDY

The intent of this research is to examine early educators' use of pedagogical documentation to support individualization within inclusive preschool classrooms. Pedagogical documentation is defined as a collaborative process between adults and children by which concrete examples of an individual child's thinking are observed, analyzed, and interpreted and then applied to extend learning (Broderick & Hong, 2011; Goldhaber, 2007; MacDonald, 2007; Rinaldi, 2006). Although pedagogical documentation has extensively been studied in other countries, empirical investigation of pedagogical documentation to support early educators' individualizing practices within the early childhood special education system in the U.S. is limited (Buldu, 2010; Ebbeck & Chan, 2011; Emilson & Samuelsson, 2014; Mitchel, 2003; Picchio, DiGiandomenico, & Musatti, 2014; Waller & Bitou, 2011).

The research questions central to the current study are:

1. How do early educators adjust their individualizing behaviors due to their acquired knowledge and use of pedagogical documentation?

2. What meaning do early educators attribute to the knowledge gained of a child with disabilities through the use of pedagogical documentation?

3. How do early educators working in inclusive settings interpret their experiences learning and implementing pedagogical documentation?

The foundational support for the structure and design to answer these research

questions can be found within the social constructivist paradigm. Principles that shape

social constructivism hold that knowledge is gradually constructed through the use of

language and that learning takes place as a result of an individual's interactions with

other people (Vygotsky, 1978). Given the social nature of pedagogical documentation,

situating the current study within a paradigm that contextualizes learning within social

interactions is fitting. Further, examination of the research questions is constructed

around Bandura's social cognitive theory (1986). Whereas the social cognitive theory

offers the broad framework for addressing the research questions, the progression of

knowledge acquisition defined within Bandura's observational learning process provides

the lens through which the impact of each step of pedagogical documentation on

supporting the early educator's individualizing practices will be examined.

A multiple qualitative method design was used to gain understanding of the

phenomenon under study (Hall & Rist, 1999). In accordance with the literature, this

design uses the collective strengths and offsets the weaknesses associated with each data

collection method when used individually (Creswell & Miller, 2000; Denzin, 1989).

Researchers suggest that methodological triangulation, the application of more than one

qualitative approach to investigate a research question (Denzin, 1970), enhances

confidence that the collected data captures a valid representation of the phenomena being

studied (Dellinger & Leech, 2007).

Presented within the remainder of this chapter are (a) the definition of terms, (b)

the statement of research problem, and (c) the purpose of the study. Prior to concluding

the chapter, the significance of the study and a description of subsequent chapters will be discussed.

Definition of Terms

The purpose of this section is to build mutual understanding of the terms and phrases informing the philosophy and execution of individualization and pedagogical documentation relevant to this study.

Individualization

Individualization is a foundational component of early childhood special education and of high quality inclusion services. In fact, the guarantee of individualization is a legal right afforded all students with disabilities by the Individuals with Disabilities Education Act (IDEA), through mandates for individualized family service plan (IFSP) in part C, and individualized education program (IEP) in part B (IDEA, 2004). The following section includes the definition of individualization that guides the current study.

Individualizing versus differentiation. Although the terms *individualizing* and *differentiation* are interchangeably used throughout special education literature, (Dee, 2010; McTighe & Brown, 2005; Renick, 1996), the U.S. Department of Education's (USDE) education technology plan (2010) reports a small but distinct dissimilarity between these practices. The USDE states that

> Individualization refers to instruction that is paced to the learning needs of different learners. Learning goals are the same for all students, but students can progress through the material at different speeds according to their learning needs. For example, students might take longer to progress through a given topic, skip topics that cover information they already know, or repeat topics they need more

help on, whereas; Differentiation refers to instruction that is tailored to the learning preferences of different learners. Learning goals are the same for all students, but the method or approach of instruction varies according to the preferences of each student or what research has found works best for students like them. (p. 11)

Note that in the USDE definition individualization addresses identified *learning needs*, whereas differentiation targets *learning preferences*. In spite of the aforementioned minor differences, differentiation and individualization employ identical methods to address the needs of all children. Therefore, components of both practices are used to define individualization as it is applied in the current study.

Further, while individualization has its roots in special education, differentiation began as a regular education initiative designed to augment instruction to students identified as academically gifted (Friend & Bursuck, 2009). Differentiation, when used in regular education settings, emphasizes a prior attention to arranging the environment, lessons, and instruction in a manner that did not privilege only one type of learner. The concept of differentiation heavily draws from Universal Design for Learning (UDL), which calls for the basic design of environments, routines, and activities to be accessible and useful to people of all abilities and levels of needs (Rose, Meyer, & Hitchcock, 2005).

Individualization is used throughout this study to encompass both practices. The decision to proceed as stated is based upon evidence from numerous studies where differentiation was used in inclusive environments (DeBaryshe, Gorecki, & Mishima-Young, 2009; Renick, 1996). These same studies include discussion of applying differentiation specifically to instructing children with disabilities (Renick, 1996).

As a result of the review of this literature, the definition of individualizing practices as defined within this study is the collective (a) planning, (b) instructional, and (c) interactional behaviors used by early educators to include and facilitate the participation of young children with disabilities in inclusive classrooms (Grisham-Brown & Pretti-Frontczak, 2003; Horn, Lieber, Sandall, Schwartz, & Wolery, 2002; Pretti-Frontczak & Bricker, 2004).

Terms Related to the Process of Pedagogical Documentation

Pedagogical documentation is a key component of the Reggio Emilia approach to early childhood education (Edwards, 1998; Edwards, Gandini, & Forman, 1998). During the process of pedagogical documentation, the educator observes and captures data on the child's play and interactions through extensive note taking, photography, or various other recording methods. After the educator has interpreted the data, it is presented to the child and other educators for further interpretation and analysis. Next, the data is used to create activities and learning experiences thought to suit the learning needs of the child. Finally, the data is organized to create an esthetically pleasing visual presentation that is exhibited publicly and used to displayed the learning process of the child.

The Reggio Emilia approach began in northern Italy to meet the post-World War II needs of families with young children (Edwards, Gandini, & Forman, 1998; New, 2007). Through pedagogical documentation and other principle components of the approach the child, the teacher, the family, and the community work in unison to create educational environments supportive of the multiple means children use to learn. These components include (a) long term projects and real life experiences as vehicles of

learning; (b) collaboration between teachers, family and educational support specialist (e.g., Atelistas and Pedagogista); (c) use of the environment as the "third teacher" and (d) extensive documentation for assessment, planning and, to support the use of the environment as the "third teacher" (Edwards, 2012). Another prominent feature within the Reggio approach is maintaining an aesthetically pleasing environment to support children's learning. The environment at large also plays a vital role in nurturing the child's natural desire to learn. The specialized terms used to operationalize the practice and that are relevant to the current study are discussed below.

One hundred languages of children. Loris Malaguzzi (1998), the founder of the Reggio Emilia approach used a metaphor of languages in a poem titled, *No way. There are 100,* to describe the many ways children instinctively use to learn about the world around them. Practically speaking, these languages represent the variety of ways children examine objects and interact with the environment and others to gain understanding and grow in knowledge. The more than 100 languages are expressed through, but are not limited to, drawing, music, movement, or sculpting. Stressed in the poem, and enacted within the Reggio Emilia approach, is the idea that children learn most authentically when their use of the many languages is supported by educators, by families, and by the environment in which the child is educated. Of equal importance in the approach is that educators are able to recognize and incorporate each of the languages into the daily classroom experiences of the children. Teachers that are attuned to these languages are thought to be able to address the learning needs of a wide variety of children, inclusive of children from diverse backgrounds or with special learning needs (Edwards, Gandini, &

Forman, 2012; Rinaldi, 2004). Drawing from research results indicating that understanding these languages may support addressing the learning needs of a wide variety of children, early educators participating in the current research project will be trained to recognize these languages as a part of the pedagogical documentation process. It is believed that cultivating early educators' ability to identify the many languages the child uses to express his or her learning may provide educators with child related information that supports their individualizing practices (Malaguzzi, 1998; Rinaldi, 2004, 2006).

Visible listening. Visible listening is the act of listening and responding to the theories of children and others that results in the creation of a shared understanding of the world. As defined by Rinaldi (2001), it is a way of connecting with others through "expressing our theories to others" in a manner "that transforms a world which is not intrinsically ours into something shared" (p. 81). Clark and Moss (2011) write that visible listening goes beyond attending to the spoken word, but also encompasses sensitivity to and observation of the play behaviors and physical cues used by children to communicate.

Engaging in visible listening requires questioning, responding, and reacting both physically and affectively to the words and actions of children. Visible listening is both interactive and reflective, and achieved in part when the adult intently listens and allows the child ample time to form and respond to questions (Clark & Moss, 2011; Malaguzzi, 1998; Rinaldi, 2006). Questions posed by the teacher in response to the child's queries are also central to visible listening, as the teacher responds to the child's questions with

questions. This type of questioning allows the teacher to expand upon and gain understanding of the theories each child uses to guide his or her learning. The affective response required in visible listening pertains to the degree of attention and emotional investment the adult shows when having a conversation with a child.

Although visible listening is required throughout pedagogical documentation, it is most actively applied during the second step of the process. Within that step of the process visible listening is used to help the early educator interpret and analyze information gathered about the child within the first step of the process. Both the enactment of visible listening and the steps of pedagogical documentation will be discussed in subsequent chapters.

Documentation artifact. For the purpose of the current study a documentation artifact is defined as the physical product that results from the process of pedagogical documentation. During the process of pedagogical documentation, the early educator must (a) photograph the child being observed, (b) produce a written description of observation, (c) analyze and interpret the observation, (d) discuss and analyze the observation with the child, and (e) reinterpret the observation based on the discussion of the observation with the child. The combined product of the aforementioned actions results in the production of a documentation artifact.

<center>**Statement of Research Problem**</center>

Existing research provides minimal information on how the use of pedagogical documentation influences the individualizing practices of early educators working with children with disabilities. The application of the process to individualizing instruction for

both typical and diverse populations of young children around the world has received

some attention within international early childhood literature (Bath, 2012; Buldu, 2010;

Carr, 2001). Current research indicates that the countries of Australia, Canada, Sweden

and New Zealand support the use of the process for creating and sustaining

individualized and inclusive learning environments for typical and diverse young children

(Blaiklock, 2008; Carr, May, & Podmore, 1998; Doherty, Friendly, & Beach, 2003;

Government of Quebec, 2013). In fact, the process of pedagogical documentation, in

whole or in part, has been incorporated into each of these countries' early learning

guidelines to help align assessment and instructional practices with their societal and

educational goals of including all children (Bennett, 2001; Dahlberg & Moss, 2005).

A particular focus of *TeWhariki*, the early learning curriculum in New Zealand, is

to use pedagogical documentation, also called learning stories, in conjunction with

developing reciprocal relationships with parents to empower and include all children and

families (Fleet, Patterson, & Robertson, 2006). The government of Australia also

adopted learning stories into the country's national early learning standards to address the

needs of culturally and linguistically diverse children (Fleet, Hammersley, Patterson,

Schillert, & Stanke, 2001; Soler & Miller, 2003). For similar reasons, regional education

systems within Italy, where pedagogical documentation originated, and the United

Kingdom have also adopted pedagogical documentation as an individualizing practice

(Bath, 2012; Vakil, Freeman, & Swim, 2003).

Pedagogical documentation has been found beneficial to accessing and

incorporating the 'funds of knowledge' of foreign, indigenous, and aboriginal students

into the school wide curriculum and classroom practices of educators in New Zealand

and Australia (Connerton & Patterson, 2006; Hedges, 2015). Educators in other

countries applied a similar process to engage linguistically diverse students in small and

large group classroom activities (Buldu, 2010; MacDonald, 2007). Although it is clear

that pedagogical documentation is useful for addressing the needs of children from

culturally and linguistically diverse backgrounds, there is little to no information on its

applicability for assessing and instructing young children with diagnosed disabilities,

particularly in the U.S.

Interestingly, research results from Italy on early education centers implementing

the Reggio Emilia approach indicate that pedagogical documentation is used to meet the

special rights of children with disabilities (Smith, 1998; Soncini, 2012). The special

rights afforded to children with disabilities in Italian Reggio preschools align with the

participation aspect of the United Nations Conventions on the Rights of Children

(UNICEF, 1989), which states that all children deserve to be included in the education

system (Smith, 1998; Soncini, 2012). In these preschools pedagogical documentation is

used to identify the supports needed to maintain the child's status as an equal participant

in their education and as a contributor to the collective growth of their learning

community (Bennett, 2001; Edwards et al., 2012). The information derived from

pedagogical documentation is used to create a declaration of intent for the child with

disabilities, a special education related document similar in purpose to the Individualized

Education Program (IEP) used in the U.S. (Soncini, 2012). However, because most

existing studies neither specifically focus on pedagogical documentation in relation to

special education, nor report on the ability status of participating children, knowledge on teacher perception of the process for individualizing for children with disabilities is limited.

International researchers suggest that pedagogical documentation facilitates individualization for all children by creating a space for the teacher and child to collaboratively explore the internal theories the child employs to build knowledge. Pedagogical documentation is also thought to build the ability of the educator to access authentic information about the child to create individualized learning opportunities aligned with the interests and thinking capacity of the child (Fyfe, 2012; Giudici, Rinaldi, & Krechevsky, 2001; New, 1998; Rinaldi, 2006). Reggio scholars and other pedagogical documentation researchers (Fraser, 2000; Giudici et al., 2001; New, 1998) equate the authentic knowledge gained from engaging in pedagogical documentation with making thinking visible. Making the thinking of children visible is achieved by using open-ended questions and skillful listening to help children externalize and produce concrete examples of their theories on learning and understanding the world (Rinaldi, 2006; Ritchhart & Perkins, 2008).

As a result of the process, unique and vital information regarding how the child learns is made visible in two ways, through the child's verbal responses to questioning and again in the child's graphic arts representation of his or her thinking. Further, the concrete result of the entire pedagogical documentation process, referred to as a documentation artifact, can be revisited to help the teacher and the child recall and revise past theories the child applied to learning (Mitchel, 2003). Irrespective of these claims to

promote individualizing for all children, information on the use of pedagogical

documentation with children with disabilities remains minimal. With the exception of

articles related to the special rights of children within the Reggio approach, none of the

studies mentioned in this section address the use of pedagogical documentation with

children with diagnosed disabilities. Existing studies merely offer descriptions of what

should happen in theory when implementing the process of pedagogical documentation,

without addressing actual experiences of early educators actively engaged in the process

(Vakil et al., 2003). In order to support the supposition that pedagogical documentation

is applicable to individualizing for all children, in particular children with disabilities,

more research is needed.

Purpose of Study

The purpose of this qualitative study is to understand changes to the

individualizing practices of preschool educators who have received training in the use of

pedagogical documentation. Horn and colleagues (2002) define individualizing as

strategies and interactional measures taken to assist children with disabilities in

accomplishing educational and functional goals. Individualizing practices, as defined

within this study, are the collective (a) planning, (b) instructional, and (c) interactional

behaviors used by early educators to include and facilitate the participation of young

children with disabilities in inclusive classrooms (Grisham-Brown & Pretti-Frontczak,

2003; Horn et al., 2002; Pretti-Frontczak & Bricker, 2004). Planning, as a component of

individualizing practices, addresses how and with who the early educator collaborates to

create lesson plans and developmentally appropriate activities to assist the child with

disabilities in meeting his or her individualized education plan (IEP) goals (Grisham-Brown & Pretti-Frontczak, 2003). The instructional and interactional aspects of individualizing practices are the combination of evidence and research-based individualizing strategies consistently used by participating early educators to meet the needs of their students with disabilities (Horn et al., 2002; Pretti-Frontczak & Bricker, 2004).

For the purpose of this study, inclusive is defined as the enrollment and participation of at least one child with an IEP in a regular classroom alongside typically developing children (IDEA, 1997). Annual reports to Congress compiled by the Office of Special Education Programs (OSEP) have chronicled the steady increase in the number of young children with disabilities receiving part or all of their special education services within an inclusive setting (OSEP, 2014). Since the 1997 amendments to IDEA the number of inclusive placements for children age three to five has increased from 43% (251,058) during the 1998–1999 school year to 65% (484,468) by the end of the 2012–2013 school year (OSEP, 2001, 2014).

Accompanying the increase in these types of placements were reports on the challenges faced by early educators attempting to meet the many and varied needs of the children with disabilities in their care. Early educators stated that the lack of special education training and limited resources inhibited their provision of the appropriate educational services to children with disabilities (Buell, Hallam, Gamel-McCormick, & Sheer, 1999; Burke & Sutherland, 2004; Buysse & Hollingsworth, 2009; Dinnebeil, Rush, Gallagher, & Rhodes, 2003; Elkins, Van Kraayenoord, & Jobling, 2003; Horn et

al., 2002; Leatherman & Niemeyer, 2005). Given the reported benefits of inclusion to children of all abilities, study of a process (i.e., pedagogical documentation) found to support the full inclusion of all children in preschool programs around the world for use in inclusive child care settings in the U.S. is warranted (Nurse, 2001; Nutbrown & Clough, 2004; Phillips, 2001; Vakil et al., 2003).

Therefore, the aim of the study is to apply tenets of the social cognitive and observational learning theories to exploring the effect of pedagogical documentation on the individualizing practices of early educators working in inclusive child care settings. The collection of data used to develop a qualitative understanding of the experiences of the four participating educators was accomplished through observations, field notes, a survey, and interviews carried out in the three phases of this study.

Significance of Study

A study of the impact of pedagogical documentation on the individualizing practices of early educators is important for many reasons. First, addressing the gap in literature specifically related to the applicability of pedagogical documentation as an individualizing practice for young children with disabilities will be addressed. Second, as the number of inclusive preschool placements continues to rise, early educators may require additional skills to supplement and support their individualizing practices.

Although results of international research indicate the positive influence of pedagogical documentation on (a) communication between families and educators, (b) child participation in assessment and planning, and (c) teacher preparation, few studies target the impact of the process on early educators' individualizing practices for children

with disabilities in inclusive settings in the U.S. (Pettersson, 2015; Waller & Bitou, 2011). It is clear, based on the type and the focus of current literature that empirical information on pedagogical documentation directly related to early educators working with children with disabilities is needed. Therefore, in order to address the stated gap in the literature, this examination of early educators' perceptions and use of pedagogical documentation in supporting their individualizing practices within inclusive settings will be conducted.

Conclusion

This chapter provided information on the research problem and the overall purpose of the study. Based on the reported results from international studies on the benefits of pedagogical documentation, additional research on this process as an individualizing practice for young children with disabilities within inclusive child care programs in the U.S. is warranted. The knowledge gained from the proposed study may provide valuable information that can further support the individualizing practices of early educators and thus better outcomes for young children with disabilities.

CHAPTER II

LITERATURE REVIEW

Introduction to the Literature Review

The purpose of this literature review is to present and synthesize the current body of empirically supported knowledge on individualization and pedagogical documentation. International researchers have found pedagogical documentation beneficial to including diverse young children in preschool settings sites. These findings warrant futher study of pedagogical documentation's impact on the individualizing practices of early educators working in inclusive child care programs in the U.S. The knowledge gained from the proposed study may provide valuable information on supporting the individualizing practices of early educators which may lead to better outcomes for young children with disabilities.

Presented first is a detailed discussion of the literature selection criteria, and the theoretical framework that shape the current study. The remainder of this review focuses on imparting what is currently know about individualization within the context of early education in the U.S. and the international use of pedagogical documentation. Specific to the theoretical framework, observational learning, a central tenet of social cognitive theory will be offered as a means for connecting knowledge on pedagogical documentation and individualization to the stated purpose of this study.

Literature Search Procedures

Empirical international and national studies that focused on pedagogical documentation in early childhood and early elementary settings are included in this review. The selection criteria encompassed articles centered on pedagogical documentation as it has been applied within the field of education, from its use within teacher preparation programs to its use in early education environments. English language articles in which the researchers explored the efficacy or effectiveness of pedagogical documentation for use in the education and the assessment of children under the age of eight also met the inclusion criteria.

Whereas international studies on pedagogical documentation were included in this review, inclusion of articles on individualization was limited to studies conducted in the U.S. Given that special education individualization laws and practices in the U.S. are vastly different than other countries, the decision to only include and review individualization studies conducted within the U.S. is supported. The aforementioned inclusion criteria were based on the current study's focus on individualizing practices and strategies of early educators working within the early childhood special education system in the U.S.

The initial exploration of existing literature entailed probing the Academic Search Complete, ERIC, and PsycINFO academic databases. The database search for peer reviewed literature began by entering the phrases individualizing practices or pedagogical documentation coupled with the following terms: *disability, early childhood, early childhood education, early childhood educators, early intervention, early childhood*

special education, formative assessment, individualized instruction, preschool, preschool teachers, Reggio Emilia approach, special needs. In addition, the term "Reggio Emilia approach" was paired with (a) assessment, (b) developmental delays, (c) disability, (d) formative assessment, (e) individualized instruction, and (f) special needs. The word "pedagogy" frequently appeared as a key word in many of the articles found during the preliminary search and was therefore paired with the previous terms and used as a descriptor in subsequent database searches. The reference list from articles meeting the aforementioned criteria were also searched to identify additional suitable articles. This literature review is a synthesis of the 30 articles on individualizing and pedagogical documentation identified as a result of the searches delineated in the preceding section.

Theoretical Framework

The observational learning aspect of social cognitive theory is used within this study to examine changes to the individualizing practices of early educators following training in pedagogical documentation, a technique largely driven by observation. Because social cognitive theory supports the observation of a modeled behavior as a viable means of learning or altering the same or related behaviors (Bandura, 1971, 1977; Manz & Sims, 1981), its application to this study is merited. Specifically, social cognitive theory is used to explain changes in the planning and instruction of teachers working with student with disabilities, as precipitated by the use of pedagogical documentation. Through observation of and collaboration with the student, the teacher is purported to obtain valuable information on the student's thought processes, thus enabling the teacher to better serve the child.

Social Cognitive Theory

Social cognitive theory provides a useful framework for explaining why early educators may alter their individualizing practices to incorporate a newly acquired skill. Reciprocal determinism, also termed triadic reciprocal determinism, and observational learning are two central tenets within Bandura's social cognitive theory (Bandura, 1999). In simple terms, Bandura states that learning can occur through observation and that learning is influenced by interaction between personal factors, the environment, and the social experiences of the individual. Whereas reciprocal determinism governs the continuous interaction of three factors, observational learning is the mechanism by which new knowledge and behaviors are learned. The discussion that follows contains descriptions of reciprocal determinism, observational learning, and Bandura's explanation of how each component impacts behavior, development, and learning.

Reciprocal determinism. In Bandura's (1977, 1986) formalization of reciprocal determinism he contends that behavior, the environment, and the individual's cognitive ability, in addition to other personal factors, work as interacting determinants that are influenced by and influence the development and functioning of the other components. The internal personal factors that comprise the individual component are (a) cognitive ability, (b) beliefs and expectations, (c) personality, and (d) self-efficacy. The environmental component consists of the physical surroundings that hold potentially reinforcing stimuli for the individual. Lastly, the behavior component is defined as how the individual responds to stimulus in order to achieve a goal. Thus, according to Bandura expectations, self-perceptions, objectives, and physical structures guide

behavior, and as a consequence that behavior impacts the cognitions and biological

properties of the individual. Environmental events such as modeling, instruction, and

social interactions affect the person, and the person in turn, based on his or her

personality and physical features, induces different reactions from the environment.

Finally, behavior shapes aspects of the environment to which the individual is exposed,

and behavior is, in turn, altered by that environment. Bandura posits that although the

triad of factors share a bidirectional relationship, the degree of strength to influence the

other components is not equally distributed between each of the components (Bandura,

1989, 1999).

      Observational learning. The observational learning component of Bandura's

social cognitive theory holds that the acquisition of new behaviors occurs through the

process of watching and imitating others (Bandura, 1977). Observational learning, as

defined in psychology, is a process by which adaptive information is acquired from the

surrounding cultural environment (Bandura, 1977; Flynn & Whiten, 2013). Bandura

(1977) suggests that during ongoing social interactions knowledge on behavior is

transmitted from the model of the behavior to the observer of the behavior. In a seminal

study on the transmission of aggressive behavior, Bandura, Ross, and Ross (1961)

illustrated the impact on the interaction of a young child with an inflatable toy after

viewing an adults' physical attack on the same toy. Their results and the results from

comparable research support the belief that observational learning is a powerful means of

transmitting knowledge on behavior (Flynn & Whiten, 2013; Hanna & Meltzoff, 1993;

Jeffery, 1976; McGuigan, Whiten, Flynn, & Horner, 2007; Meltzoff & Moore, 1977). In

fact, there is some empirical support indicating learning by observing is as beneficial as learning-by-doing. Although these results do not privilege observational learning over learning-by-doing in all tasks, such as driving a car and other complex motor tasks, observational learning was deemed beneficial in learning a variety of tasks, from young rats skinning pine cones (Terkel, 1996), to humans performing abstract mental tasks (Camerer & Ho, 1999; Merlo & Schotter, 2003).

Moreover, in the field of economics, Merlo and Schotter (2003) found that the degree of learning achieved though observational learning was equal to the learning that occurred by doing. Using an experimental design, they tested the hypothesis regarding learning to make decisions to achieve similar outcomes, *the observer* of the action being performed would achieve results similar to the results obtained by *the doer* who actually performed the required steps. Although Merlo and Schotter's (2003) research differed from previously conducted studies, such as work conducted by Bull, Schotter, and Weigelt (1987) and Schotter and Weigelt (1992), in design and experimental conditions, the results of each of their studies position observational learning as a highly effective method for acquiring knowledge.

Components of observational learning. Bandura (1976) states that four components of (a) attention processes, (b) retention processes, (c) motor reproduction processes, and (d) motivational processes enable the extraction and incorporation of the skills from the model of the behavior to the observer of the behavior. At a basic level the four components of Bandura's process are similar to other theories on observational learning, which propose that emulation, imitation, or mimicry best describe the cognitive

processes that facilitate observational learning (Meltzoff & Prinz, 2002; Tomasello, Kruger, & Ratner, 1993; Want & Harris, 2002; Whiten & Ham, 1992; Whiten, Horner, Litchfield, & Marshall-Pescini, 2004). In contrast, Bandura's (1977) research supported the notion that imitation alone was not accountable for the entire learning process, when imitation is defined as the simple duplication of an observed task.

Although a substantial portion of the literature positions imitation as the central process within observational learning (Bornstein & Bruner, 1989; Lyons, Young, & Keil, 2007; McGuigan et al., 2007; Meltzoff & Moore, 1977), equally compelling results from a wide range of disciplines, assign the same position to the four component cognitive process put forth by Bandura (Bandura, Jeffrey, & Bachicha, 1974; Decker, 1982; Jeffrey, 1976; Merlo & Schotter, 2003; Yi & Davis, 2003). Bandura suggested that factors such as (a) the degree of attention the observed task elicits from the observer, (b) the internal coding of the observed task, (c) the mental conversion of the internal coding into specific motor rehearsal of the task, and finally (d) the motivation, as related to the outcome of performing the task (1977). Thus, presented next is the four component cognitive process thought by Bandura to govern observational learning.

Attentional processes. The attention process determines what is selected to be observed and is dependent, in part, on dynamics related to characteristics of the observer and the model of the behavior (Bandura, 1977). The perceptual abilities of the observer, coupled with his or her past experiences and his or her purpose for observing the model influences the degree of attention afforded the behavior. Conversely, models of behavior exhibiting appealing interaction styles tend to gain a greater proportion of attention. As

stated by Bandura (1976) "models that possess engaging qualities are sought out, while those lacking pleasing characteristics are generally ignored or rejected" (p. 24).

Additional factors controlling the attention process are the salience and complexity of the behavior and the interaction between the model of and the observer of the behavior (Bandura, 1977). Whereas the former aspect impacts the level and duration of the observational attention given to the behavior, the latter depends on the regularity and structure of interaction between the model of and the observer of the behavior. Therefore, according to Bandura (1977) sporadic unstructured interactions will garner less attention than consistent structured interactions.

Retention processes. Bandura (1977) identified retention as a multi-step process that governs the recall of observed information. The *imaginal* and *verbal* representational systems are the mental processes used to code and to store observed information. As the observer attempts to perform the learned behavior, the coded information is retrieved and used to guide the observer's actions. Occurring within the system is the (a) symbolic coding, (b) cognitive reorganization, and (c) symbolic rehearsal of observed behaviors (Decker, 1980, 1982; Goldstein & Sorcher, 1974). Bandura (1977) specifically states,

> Symbolic coding is the process in which individuals organize and reduce the diverse elements of a model's performance into a pattern of verbal symbols. Cognitive organization is the process of forming codes which consist of verbal symbols already present in the observer's cognitive framework. Symbolic rehearsal is the process in which observers visualize or imagine themselves performing the behaviors which were previously seen performed by another individual. (p. 26)

In this system symbolic coding is exclusively a function of the imaginal system and symbolic rehearsal is a function of the verbal system. As a singular component, symbolic coding was the most beneficial for retaining information if the codes produced were meaningful (Bandura et al., 1974). The cognitive organization aspect, unlike the previously mentioned aspects, serves a purpose in both the retention and the retrieval of information.

Motor reproduction processes. Motor reproduction processes transform symbolic representations into appropriate actions (Bandura, 1977; Gog & Rummel, 2010; Jeffrey, 1976). The execution of the modeled action by the observer is addressed within motor reproduction (Bandura, 1971; Jeffrey, 1976). While attention processes focus on the acquisition of the behavior to be learned, motor reproduction governs the actual performance of the learned task. Motor reproduction is facilitated when performance feedback is incorporated into the rehearsal of the behavior. Jeffrey (1976) also found that, even when adjusting for differences in the ability of the subjects, participants who paired symbolic and motor reproduction did significantly better at the given task than subjects who did not use symbolic reproduction in concert with motor reproduction. He also states that motor reproduction was further enhanced when preceded by symbolic reorganization of observed behavior. Specifically, the more time the subject devoted to mentally rearranging the symbolic representations of the behavior prior to attempting the behavior the better the achieved outcome.

Motivational processes. Motivational processes address the identification of the outcomes that support the adoption of the modeled behavior. Bandura (1986) proposes

that the more rewarding the outcome of the behavior, the more likely the observer is to attempt or make repeated attempts to reproduce or sustain use of the observed behavior. More important to the motivational processes than external rewards for performance of an observed behavior are the internal consequences for reproducing behavior. Simply stated, the reproduced behavior that results in higher levels of self-satisfaction offered more motivation for repetition than behaviors found to be objectionable (Zimmerman & Kitsantas, 2002).

A growing body of literature focuses on the impact of motivation on various aspects of teaching and learning. Researchers have investigated how interest and motivation interact to influence the content taught in teacher education programs (Long & Moore, 2008), and how interest and motivation affect what is learned by unmotivated students (Hidi & Haraekicwicz, 2000). The results from these studies indicate that motivation can have a positive impact on both of the investigated factors.

Application of Social Cognitive Theory and Observational Learning to Current Study

The social cognitive theory guides the examination of how new inputs into one of the three components impacts the remaining components thought by Bandura to comprise the social system in which individuals develop behaviors and competencies (Bandura, 1989, 1999). Specifically, how are the individualizing practices (behavior) of early educators (individual), working in inclusive child care settings (environment), influenced by pedagogical documentation (new behavior)? The reciprocal nature of the relationship suggests that changes in one component will precipitate changes in the other components

(see Figure 1). Therefore, it is expected that the type and extent of changes in early

educators' individualizing practices, inclusive of instructional and environmental changes

will become evident as a result of the current empirical endeavor.
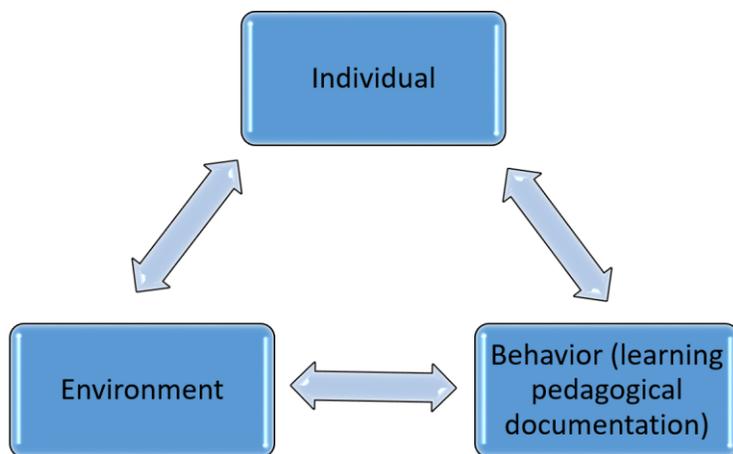
Figure 1. Reciprocal Determinism Component of Social Cognitive Theory.

The progression of knowledge acquisition is delineated within the observational

learning aspect of social cognitive theory. The researcher believes that the observational

learning process can aptly illustrate how the use of pedagogical documentation may

impact the individualizing practices of early educators. As illustrated in Figure 2, when

added together each component of the proposed study may result in changes to teachers'

individualizing practices. The attention process, which is the preliminary step of

observational learning, is governed by observer characteristics and the interactions

between the observer and the model of behavior. In this study, the former is defined as

teachers' level of education and the latter the inclusive environment in which the teacher

and the child interact. The aforementioned qualities, when coupled with training in and

use of pedagogical documentation, enable teachers to obtain insight into the child's

thinking process.
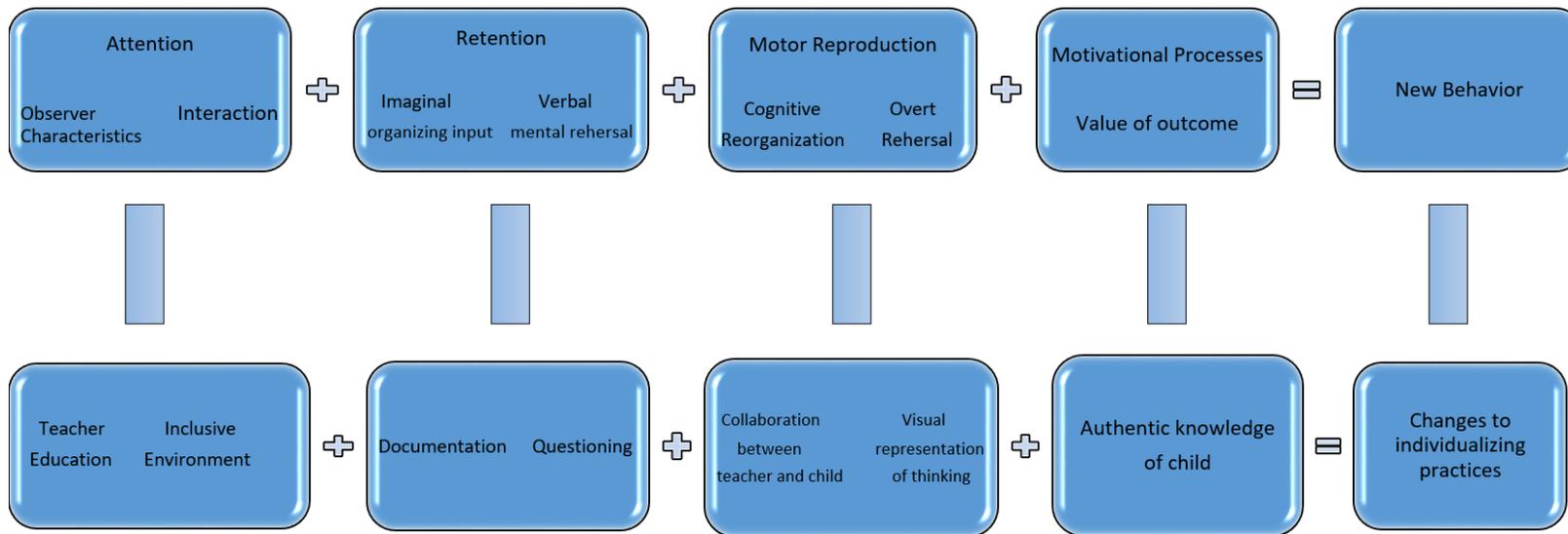
Figure 2. Observational Learning Theory.

Although the entire observational learning process was relevant to the current study, the retention process was given specific attention. Research has shown skills learned by means of observational learning generalized for use in other contexts (Buchanan & Wright, 2011; Christensen, Lignugaris-Kraft, & Fiechtl, 1996; Decker, 1980/1982; DeQuinzio & Taylor, 2015; Rohbanfard & Proteau, 2011; Wang, Meltzoff, & Williamson, 2015) when key components of the retention process are facilitated. As previously stated, during the retention process the observer mentally creates an image or verbal representation, also known as symbolic codes, for an observed model.

Empirical results indicate that the retention process is supported and the observers' ability to apply the learned behavior within different context is enhanced when the observer is induced to symbolically code information (Bandura et al., 1974; Decker, 1980, 1982; Yi & Davis, 2001, 2003). The retention process is further supported by providing the observer with written descriptions of aspects key to understanding the target or *learning points* (Goldstein & Sorcher, 1974) to be taken from the observation. In this study, pedagogical documentation serves to support the retention process. By using pedagogical documentation, the teacher is providing written descriptions of the child's observed activities to be used to facilitate interpretation of the child's thinking process. This exercise may reinforce or illuminate information that offers insight on activities, instruction or environmental changes to support the better inclusion of the child in the classroom. Figure 1 depicts the conceptualization of the theoretical framework described above.

The motor reproduction process, which encompasses cognitive reorganization and overt rehearsal, applies to the interpretive step of the pedagogical documentation process. Knowledge of the child acquired by the early educator during previous steps of pedagogical documentation is reorganized as the teacher attempts to gain the child's perspective thorough the use of open-ended questions and visible listening. The input from the child also serves as feedback to the early educator on his or her understanding of the child's thinking process, given that the child's input either confirms or challenges the teacher's interpretation of the acquired knowledge. Overt rehearsal occurs as the early educator uses all the knowledge gained throughout the process of pedagogical documentation to the construction of individualized lessons or adaptation of the learning environment to further meet the needs of the child with disabilities.

The impact of pedagogical documentation on the ability of the early educator to meet the needs of the child with disabilities is addressed within the motivational process of observational learning. Specifically, if the use of pedagogical documentation produces a highly valued outcome for the early educator, such as improving his or her ability to create individualized lessons and learning environments for the child with disabilities, the early educator may be motivated to fully incorporate pedagogical documentation into his or her individualizing practices. Reciprocal determinism and observational learning, respectively, are also applied to addressing the stated research questions.

The next section details individualization and its importance in addressing and mitigating the effect of diagnosed disabilities and learning challenges in young children. Statistics supporting the increased need for effective individualizing practices will be

described prior to addressing early educators' individualization related concerns. This is followed by delineation of the benefits of individualization and the types of individualizing strategies. Finally, the section culminates in discussion of factors found to support early educators' attempts to individualize their instructional practices to meet the needs of children with disabilities.

Individualization

Individualization is one means by which children with disabilities receive the specialized instruction mandated by special education law (IDEA, 2004). Increasingly this specialized instruction is occurring in regular early childhood classrooms (OSEP, 2012), when regular is defined as class enrollment with majority (i.e., at least 50%) children of typical development (IDEA, 2004). Statistics published by OSEP bear witness to the increase in the number of young children with disabilities receiving all or a portion of special education serves within regular education settings, here after referred to as inclusive settings or inclusive classrooms (OSEP, 2012). Nationally, from 1993 to 2012, the percentage of three- to five-year-olds receiving special education services in inclusive settings increased from 48% to 65%. Although the inclusion rate in North Carolina was at 70% in 1993, notably higher than the national rate for that year, the statewide percentage since then has consistently ranged from 61% to 69%. Most recently, North Carolina statistics for the 2013–2014 school year show that of the 18,801 three- to five-year-olds eligible and receiving IDEA Part B services in the state, 66.46% (12, 496) were included in a regular preschool setting (EDFacts, 2014). In accordance with IDEA 2004 all children with disabilities, regardless of placement, are entitled to

specialized instruction to meet the tenets of a free and appropriate education (IDEA, 20 U.S.C. § 1401(a)(16). However, in order for early educators to effectively provide children with disabilities with the specialized instruction guaranteed by special education laws, individualization must occur. Further, in order for children with disabilities to obtain the benefits associated with individualization, teachers must be prepared to implement and sustain individualizing practices (Odom, 2002).

Early Educators' Individualization Related Concerns

Early educators have found the unique needs of children with disabilities to be challenging to address in an educational setting due to training and resource-related limitations (Buysse, Wesley, Keyes, & Bailey, 1996; Dinnebeil, McInerney, Fox, & Juchartz-Pendry, 1998; Gemmell-Crosby & Hanzlik, 1994; Stoiber, Gettinger, & Goetz, 1998; Wilczenski, 1992). For instance, Eiserman, Shisler, and Healey (1995) found that early educators identified insufficient training, in particular training related to planning for and instructing children with moderate to severe disabilities, as a major impediment (Erwin & Soodak, 1995; Odom, 2000; Odom et al., 2004). Similar to the findings of Eiserman et al. (1995), participants in other studies reported a lack of understanding and a low comfort level in working with children who have severe disabilities, including (a) autism, (b) behavioral disorders, (c) multiple disabilities, (d) neurologic disorders, (e) physical disabilities, and (f) vision and hearing problems (Buysse et al., 1996; Dinnebeil et al., 1998; Dupoux, Wolfman, & Estada, 2005; Gemmell-Crosby & Hanzlik, 1994; Stoiber et al., 1998; Wilczenski, 1992).

In contrast, Gillis (2011) found the 142 recent graduates of birth to kindergarten (B-K) licensure programs who participated in her study reported feeling well prepared to work with children with disabilities. The dimensions of preparedness as defined by Gillis encompassed the participants' perceived ability to implement individualizing strategies for diverse groups of young children, including young children with disabilities. Gillis's findings diverge from those of previous studies that indicated early educators, with certification ranging from a high school diploma to a master's degree, reported a lack of comfort in their ability to implement inclusive practices, such as individualizing instruction (Dinnebeil et al., 1998; Fewell, 1993; Warfield & Hauser- Cram, 1996).

Buysse et al. (1996) reported that while early educators' awareness of their discomfort may signify openness to receiving additional training, their level of unease in using inclusive practices (i.e., individualizing activities, meeting individual needs) was significant. Other studies on early educators' sense of preparedness to include children with disabilities produced similar results, however these studies did not report the educational level of the participating educators (Buell, Gamel-McCormick, & Hallam, 1999; Buysse, Wesley, & Keyes, 1998; Dinnebeil et al., 1998; Fewell, 1993; Warfield & Hauser-Cram, 1996). Early educators' continued sense of unease with inclusion and individualizing is troubling, thus warranting further examination of factors, such as specific individualizing practices for their impact on teacher preparedness. The proposed research will address the latter factor by investigating early educators' perception of the impact of pedagogical documentation on their individualizing practices. Examining early educators' perspective of pedagogical documentation, which engages the teacher and the

child in an iterative and collaborative process, may result in the identification of factors that are needed to address teacher preparedness to individualize instruction.

Individualizing Strategies

Individualization is a key component in efforts across the field of early childhood and early childhood special education to intervene in and prevent the negative impact of unaddressed learning needs and challenges on the development of all young children. From the development and application of evidence based instructional strategies such as embedded instruction to early childhood response to intervention (RTI), in which differentiation plays a role in guiding instruction, researchers are attempting to support early educators understanding and use of individualizing strategies (Horn & Banerjee, 2009). Individualization, when used for intervention, allows early educators to meet the letter and intent of special education laws regarding the individualized education of young children with disabilities. Additionally, individualization as it is applied in early childhood RTI is aimed at maximizing educational benefits for all children (Ball & Trammell, 2011; Greenwood et al., 2011).

For the purpose of this study the individualizing strategies presented have been categorized based on characteristics listed within the generally accepted definition of each strategy. For example, strategies that are implemented through physical or verbal interaction between the child with disabilities and another person were placed within the interactional individualizing category. Conversely, individualizing strategies that do not engage the child with disabilities in interactions with others were categorized as environmental individualizing strategies. A detailed definition of empirically studied

individualizing strategies and practices developed to facilitate the full participation of

children with disabilities can be found in Table 1. Attention is now given to

disseminating the benefits associated with environmental and interactional

individualizing strategies and the ways they have been applied to meeting the needs of

children with disabilities.

Table 1

Definitions of Individualizing Strategies

Strategy	Definition
Interactional Individualizing	
Embedded Learning Opportunities	The creation of learning opportunities for children with disabilities to practice individual goals and objectives within a typically occurring, meaningful and interesting activity or event in a manner that expands, modifies or adapts the activity/event to facilitate the child's maximum participation (Bricker, Pretti-Fronczak, & McComas, 1998)
Human support	Occurs when an adult or peer models a target behavior or skill to the child with disabilities through interactive play, praise or verbal encouragement (Horn et al., 2002)
Modeling	Technique in which teacher first completes the task or behavior while child watches students then repeats the assigned task, copying the teacher's methods while working at their own pace (Ledford & Wolery, 2013)
Mand-modeling	A strategy in which questions and modeling are used to produce a targeted behavior. The process begins with the teacher observing the child and noting his focus of attention. When the focus of attention is determined and joint attention is established between teacher and child, the teacher provides a mand (a non-yes/no question) and provides a short response interval. If the child responds correctly, the child praises the child and terminates the

Table 1

Cont.

Strategy	Definition
Interactional Individualizing (cont.)	
Mand-modeling (cont.)	interaction. If the child does not respond correctly, the teacher provides a model, a response interval and consequences as appropriate (Hancock & Kaiser, 1996).
Prompting	A procedure of providing either an ascending (least to most) or descending (most to least) level of provocation aimed at eliciting target response from child. If the child makes an error or does not produce desired response the next level of provocation is enacted (Neitzel & Wolery, 2009).
Time delay	Constant time delay, a variation of progressive time delay, is a response prompting strategy designed to provide and remove prompts in a systematic manner on a time dimension. Constant time delay has two defining characteristics of (a) initial trials involve presentation of the target stimulus followed immediately by delivery of a controlling prompt; and (b) on all subsequent trials, the target stimulus is presented, a response interval of a fixed duration is delivered, the controlling prompt is provided, and a second response interval is delivered as needed (Wolery et al., 1993).
Environmental Individualizing	
Environmental support	Refers to adults altering the physical, social, and temporal environment in order to promote the child's participation, engagement, and learning (Horn & Banerjee, 2009).
Invisible supports	Occurs when adults rearrange aspects of naturally occurring activities to support the child's success in participating (Horn & Banerjee, 2009).

Table 1

Cont.

Strategy	Definition
Environmental Individualizing (cont.)	
Material Adaptations	Occur when teachers modify materials so that the child can participate as independently as possible (Horn & Banerjee, 2009).
Preferences	Refers to adults identifying child preferences and integrating them into the activity to make it more motivating (Horn & Banerjee, 2009).
Simplification	Refers to adults breaking a complicated activity into smaller parts or changing or reducing the steps involved (Horn & Banerjee, 2009).
Special Equipment	Includes homemade as well as commercially available therapeutic equipment (Horn & Banerjee, 2009).

Environmental individualizing strategies. Environmental individualizing strategies mirror what Horn and colleagues (2002) define as environmental supports. They identify environmental supports as practices in which changes to the social, physical, and temporal environment are used to facilitate the full participation or access to activities, learning experiences, or equipment. Environmental individualizing strategies have been applied to facilitating learning across developmental domains and increasing the participation of children with various disabilities in typical preschool activities (Day, McDonnell, & Heathfield, 2005; Dennis & Horn, 2011; Johnson, McDonnell, & Hawken, 2008). Day et al. (2005) demonstrated the utility of curricular modifications and classroom adaptations to facilitate the literacy development of three-

year- old twins with visual impairments attending an inclusive preschool program. Likewise, they described how special equipment and material adaptations increased the twin's participation in writing activities. Similar studies of modifications and other environmental individualizing strategies targeted the literacy development needs of children with autism, developmental delays, and speech/language disorders reported equally affirmative results (Gunter, Reffel, Rice, Peterson, & Venn, 2005; Horn & Banerjee, 2009). The implemented strategies ranged from using material adaptations, e.g., a computer instead of a book during circle time to enhance expressive language (Gunter et al., 2005), to adapting an entire curriculum to infuse it with simplified activities and invisible supports (Lieber, Horn, Palmer, & Fleming, 2008).

Evident from the findings of the previously mentioned studies, environmental individualizing strategies (i.e., modifications and adaptations) were found beneficial to addressing the literacy needs of young children with disabilities. Yet, other cognitive skills such as mathematical thinking and numeracy skills were rarely the focus of empirical investigations. One exception was Lieber et al.'s (2008) application of environmental individualizing strategies to an entire curriculum. Their work represents a departure from the majority of studies in that the other studies targeted a specific domain or activity to modify. Given the growing focus in early childhood education on each reported domain, it may be beneficial to extend early educator understanding of the applicability of environmental individualizing strategies for addressing each of the cognitive domains.

Interactional strategies. The individualizing strategies discussed in this section have in common interaction between the teacher and child as a shared characteristic. These types of strategies vary in accordance with the intensity and duration of the interaction between teacher and child (Horn et al., 2002; Sandall, 2003). Irrespective of the shared characteristic, these strategies offer insight on individualizing practices that have a growing body of data supporting their efficacy (Fox & Hanline, 1993; Grisham-Brown, Schuster, Hemmeter, & Collins, 2000; Horn, Lieber, Li, Sandall, & Schwartz, 2000; Horn et al., 2002; Sandall, 2003; Sewell, Collins, Hemmeter, & Schuster, 1998; Wolery, Anthony, Caldwell, Snyder, & Morgante, 2002).

A convergence of evidence supports early educators' use of various interactional individualizing strategies to meet the unique needs of children with disabilities within inclusive learning environments (Chiara, Schuster, Bell, & Wolery, 1995; Daugherty, Grisham-Brown, & Hemmeter, 2001). Across studies and developmental domains, these practices (e.g., modeling, time delay) have been applied and found beneficial in supporting the cognitive, language, social, and motor skills of students with disabilities (Chiara et al., 1995; Daugherty et al., 2001; Fox & Hanline, 1993; Grisham-Brown et al., 2000; Horn et al., 2000; Justice & Kaderavek, 2004; McBride & Schwartz, 2003; Sewell et al., 1998; Venn et al., 1993; Wolery et al., 2002).

A common component of interactional individualizing strategies is that they are built upon the child's response to the strategy. Prior to implementing most of the interactional individualizing strategies, inclusive of time delay, modeling, and mand modeling require educators to establish joint attention with the target child (Hancock &

Kaiser, 1996; Ledford & Wolery, 2013; Wolery et al., 1993). Other strategies, such as

adult or peer support require at a minimum that the child observe and possibly imitate the

demonstrated behavior (Horn et al., 2002; Neitzel & Wolery, 2009). Once the child is

engaged, further enactment of the strategy is dependent upon obtaining the requisite

response from the child. Strategies such as naturalistic interventions allow educators to

acknowledge and incorporate the child's interest into the individualizing process (Buysse

& Hollingsworth, 2009; Venn & Wolery, 1992). Beyond that the child does not provide

active input into the individualizing process as the interest of the child is typically

determined based on teacher observation of the child within the classroom (Horn &

Banerjee, 2009; Horn et al., 2002). Moreover, current literature does not offer insight on

how the child's active input into the use or development of individualizing strategies may

impact the individualizing process.

What has been thoroughly investigated is the means by which early educators in

other countries value and include the input of the child in individualizing practices and

strategies (Begeny & Martens, 2007; Nurse, 2001; Nutbrown & Clough, 2004; Vakil et

al., 2003; Vitello, 1991, 1994). In the countries of Australia, Canada, Italy, New

Zealand, and Sweden, the philosophy and process of pedagogical documentation is used

to include and individualize instruction for all children. The reported merits of

pedagogical documentation in assisting teachers in educating young children of diverse

cultural backgrounds and varied learning needs suggest that study of pedagogical

documentation within the context of early childhood programs in the U.S. may prove

beneficial. To this end, a compelling argument in support of the examination of

pedagogical documentation for use in inclusive child care classrooms in the U.S. is made in the subsequent sections.

Pedagogical Documentation

Scholars conducting studies on pedagogical documentation outside the U.S., accredit the collaborative practice of pedagogical documentation with facilitating the inclusion of children with diverse cultural and linguistic needs (Dahlberg, Moss, & Pence, 1999; New & Cochran, 2007). Typically used as a formative assessment process, pedagogical documentation is thought to help international early educator access the child's internal learning process and apply the knowledge gained to the creation of authentic, individualized learning experiences (Nurse, 2001; Nutbrown & Clough, 2004; Phillips, 2001; Vakil et al., 2003). Notably, early educators in other countries (i.e., Italy) reported less difficulty than early educators in the U.S. with individualization for diverse populations as a result of engaging in the process of pedagogical documentation (Begeny & Martens, 2007; Nurse, 2001; Vakil et al., 2003; Vitello, 1991, 1994). However, a vast majority of the international studies reporting on pedagogical documentation did not include young children with diagnosed disabilities, thus little is known of its impact on early educators' ability to include or individualize for this specific population of children. Therefore, the goal of this study is to contribute to knowledge on the impact of pedagogical documentation on the individualizing practices of early educators working with children with disabilities in inclusive child care settings in the U.S.

Contained within the subsequent section of this literature review is information on the philosophical basis and practical uses of pedagogical documentation globally and in

the U.S. Further, the application of and components that comprise the process of pedagogical documentation are defined and analyzed.

Defining Pedagogical Documentation

Rinaldi (2006) defines documentation within the context of the Reggio approach as "a process for making pedagogical (or other) work visible and subject to interpretation, dialogue, confrontation (argumentation) and understanding" (p. 16). Dahlberg et al. (1999) labeled this type of documentation *pedagogical* to aptly describe the depth of analysis and meaning making that separates this practice from mere observation of the child. Building on Dahlberg et al.'s (1999) definition, MacDonald (2007) presents a broader definition of pedagogical documentation to encompass the content and process involving the use of concrete artifacts in the form of audio recordings, photographs, examples of the children's work, and collaborative re-visitation, interpretation, and negotiation by the protagonists (a term used in the Reggio approach to define the central role of the child, the teacher, and the parent in the educational process to promote dialogue and reflection). In simpler terms, pedagogical documentation is a collaborative process between adults and children by which concrete examples of the child's thinking are analyzed and interpreted and then applied to extend learning (Broderick & Hong, 2011; Goldhaber, 2007; MacDonald, 2007; Rinaldi, 2006). The process encompasses the individual and collective examination of the documentation to illuminate learning and inform teaching, whereas the content is defined as the documentation artifact that makes thinking visible (Dahlberg et al., 1999).

Although the Reggio approach is credited with contributing to the advancement of the field of early childhood education (Burrington & Sortino, 2004; Giudici et al., 2001; Katz & Chard, 1996; Malaguzzi, 1996), educators outside of Italy struggle to implement many aspects of the approach within the context of the adopting society's educational systems (Wien, Guyevskey, & Berdoussis, 2011). According to Reggio scholars (Rinaldi, 2001), the approach and its components (e.g., pedagogical documentation) are not a program to implement or a model to follow (Wien et al., 2011). It is instead a process that can and should be adapted to reflect the values and goals of the adopting society (New & Cochran, 2007). For example, educators in Canada (Callaghan, 2002; Catapano, 2005) and New Zealand (Bourke, Mentis, & Todd, 2011; Karlsdóttir & Garðarsdóttir, 2010) have studied pedagogical documentation as a means for addressing barriers to participation in the educational process faced by culturally and linguistically diverse children. Although the aforementioned countries changed the name to *pedagogical narration* and *learning stories* (Carr, 2001), respectively, both practices maintained the core process of pedagogical documentation, in which observation, analysis, interpretation and collaboration are used to make the child's learning visible (Edwards, 1998; Edwards et al., 1998; Filippini, 1998).

The Process of Pedagogical Documentation

The steps to gaining insight on the child as a thinker are contained within in the process of pedagogical documentation. A major point of pedagogical documentation is to attain understanding from multiple perspectives and using multiple sources of information to extend the learning of both the child and the teacher (Alcock, 2000). As a

result of the documentation process, what the child has learned and how they learned is revealed to the child and to others (Alcock, 2000; Project Zero, 2003) and subject to individual and collaborative analysis. Moreover, all parties engaged in the process of pedagogical documentation achieve greater insight on their thinking process and the thinking process of others (Project Zero, 2003).

> Grieshaber and Hatch (2003) offer pedagogical documentation as a process that
>
> (a) produces artifacts of photographs and transcribed conversations that provide children and teachers with a tangible record that can be revisited and invite further opportunities to extend learning, (b) serves as a tool of research for the educators, encouraging ongoing evaluation and renewal of the educational experience, and (c) provides detailed information that is collected and displayed for parents and the public and serves as a means of eliciting their reactions and support . . . (p. 57)

Pedagogical documentation entails individual and collective interpretation of artifacts (i.e., photograph or recording) produced during teacher observation of the child. Individual interpretation occurs as the teacher applies her understanding of child development, theories of learning, and of the child to analyzing the artifact. Central to the collective interpretation process are the meaningful conversations between the adult and the child that reveal to each party the beliefs, philosophies, and suppositions that guide the child's thinking (Forman & Hall, 2005; Rinaldi, 2006). The child's thinking process is further made available as the child produces a physical rendition of their thinking and meaning-making process. From the obtained information, the teacher develops activities or arranges the environment to support the identified thinking process of the child. Presented next are the steps within pedagogical documentation that foster this process for the attainment of deep and authentic knowledge of children.

Observation. The first step of the pedagogical documentation process is observation (Rinaldi, 2006). Similar to other types of teacher-child observation, observation in pedagogical documentation affords the educator insight on the child's cognitive strategies, social development, and interests. However, the goals of and the steps taken to conduct the observations within the process of pedagogical documentation distinguishes it from other observations. The primary purpose of pedagogical documentation observations is to acclimate the teacher to recognizing the 100 languages, as purported by Malaguzzi (1998), that are used by children to communicate their understanding and meaning making process (Alcock, 2000; Edwards et al., 1998; Rinaldi, 2006). Because children are thought to display these languages through their choice of and interaction with peers, activities, equipment, and materials, observation and recording of the child allows teachers to access the 100 languages. Teachers who are able to recognize these languages grow in understanding of not just what the child is learning, but also how the child is learning and in which ways the child is choosing to communicate his or her learning (Edwards, 2012; Rinaldi, 2004). In Edwards's (2012) view, recording the observation through photography or other means is also beneficial individually and collectively to the teacher, the child, and to the class. Since concrete evidence of the child's actions and thoughts are captured in the recorded observations, the recorded observations can be used as the "spark that reignites an interest of the child or a group of children" (Edwards, 2012, p. 153) or provide the child with an aid in reinterpreting his or her analyses of information. An equally important function of the

recorded observation is to support the teacher, in later steps of the process, in analyzing and interpreting the meaning of the behavior or event.

Acclimation to understanding the child's 100 languages is further supported by teacher questioning of the child during the observation. The questioning that occurs during pedagogical documentation observations benefits the teacher and the child. Primarily, the teacher gains additional, firsthand information on the behaviors or interactions he or she is observing. The use of questioning is thought to encourage the child to think about his or her actions as the action occurs. The child's responses to the questions posed by the teacher, in addition to the child's conversations with peers during the observation, and the teacher's expert opinion of the current level of skills and development displayed by the child at the time of the observation are then used to create a detailed description of the observation. Step one of pedagogical documentation culminates in the partial production of the documentation artifact, a teacher created document containing two to three pictures of the observation and the description of the observation. With each successive step of the pedagogical documentation process more information is added to complete the documentation artifact.

Interpretation. The second step of pedagogical documentation encompasses the individual and collaborative interpretation of the information produced in Step 1 of the process. Rinaldi and other scholars emphasize that interpretation reinforces the teacher's role as both a researcher and learner, by allowing the teacher to openly wonder about the child's thinking (Dahlberg et al., 1999; Rinaldi, 2006). Individual interpretation consists of the teacher adding the questions and suppositions he or she formed regarding the

learning process of the child during Step 1 to the documentation artifact. The individual

interpretation also sets the foundation for the collaborative interpretation of information,

as formed at this point in the process are the questions the teacher will seek to answer

during collaborative interpretation (Cooney & Buchanan, 2001; Forman & Fyfe, 1998;

Rinaldi, 2004).

Although individual interpretation is a vital part of the process, collaborative

interpretation of the artifact is necessary to generate the mutual benefit of making

learning visible. To make learning visible means to make external the internal

approaches the child applies to learning and thereby create a shared consciousness of the

child's metacognitive skills (Cooney & Buchanan, 2001; Edwards et al., 1998; Forman &

Fyfe, 1998; Rinaldi, 2006). Further, collaborative interpretation at this point in the

process symbolizes one form of sharing that documentation scholars state is needed to

ensure that the teacher and the child capitalize on the learning opportunities made

available through pedagogical documentation (Forman & Hall, 2005; Turner & Wilson,

2010).

An additional purpose of the collaborative interpretation is to reveal what and

how the child learned (Alcock, 2000). Collaborative interpretation is achieved as the

teacher and child engage in rich conversations centered on discussing the information

(i.e., the observation photographs) presented within the observation artifact. Throughout

this step the early educator takes written or recorded notes of the conversation. This step

within the pedagogical documentation process culminates in the development of a

physical representation of the child's thinking. The physical representation may consist

of a child-rendered drawing, painting, or sculpture. Further explanation of the child's

thought process is sought through continued questioning of the child as they produce the

physical representation.

Implementation. The final step entails early educator's utilization of the

accumulated information on the child to create individualized lesson plans for the child

with disabilities. In addition to studying the notes taken during the collaborative

conversations and visual representation produced in the previous step of the process, the

documentation artifact is revisited to further assist the early educator's interpretation of

the information. At this point, the notes from the collaborative interpretation are added to

the documentation artifact. Once the early educator has formulated a comprehensive

understanding of the child's current thought process, a lesson plan or a change to the

learning environment is developed and implemented. Thereafter, the process of

pedagogical documentation may begin again, in many cases building on observations

made during the implementation of the prepared lesson.

The Applications of Pedagogical Documentation

Pedagogical documentation has been applied, for a variety of reasons, in a host

of educational environments around the world, from preschool and elementary level

settings (Bath, 2012; Buldu, 2010; Cooney & Buchanan, 2001; Goldhaber, 2007;

MacDonald, 2007; Schroeder-Yu, 2008) to teacher preparation programs within institutes

of higher education (Beneke, 2000; Fiore & Rosenquest, 2010; Warash, 2007) to

professional development programs for early educators (Ezra & John, 2003; Flannery-

Quinn & Schwartz, 2011; Givens et al., 2010; Goldhaber & Smith, 1997; Goodfellow,

2004). While Goodfellow (2004) employed the process to facilitate development of teacher professional portfolios, Givens and colleagues (2010) utilized pedagogical documentation to help cultivate school-wide practices that support collaborative inquiry-based learning.

Still other researchers applied pedagogical documentation as a formative assessment in order to support the optimal instruction of young children with diverse needs, specifically children of cultural or linguistic diversity (CLD) and other learning needs (Buldu, 2010; MacDonald, 2007). It is the results of this final group of studies on pedagogical documentation, which focused on meeting the needs of diverse populations of children that may hold positive implications for supporting early educators working in inclusive child care programs in the U.S.

Prior to sharing literature illustrating the impact of pedagogical documentation on several components of teacher practice, mainly (a) planning, (b) individualizing, and (c) communicating with families, the use of pedagogical documentation with diverse groups of young children is presented. Benefits to the families of children participating in these studied are also discussed. Next, challenges early educators faced in implementing and sustaining use of the process are reported. Finally, the rationale connecting this literature to the current study is shared.

Use of Pedagogical Documentation with Diverse Populations of Children

Given the known impact of cultural and social environments on the intellectual development of young children, assessment methods that are attuned to these factors are needed (Vygotsky, 1978). The noted inadequacies attributed to standardized measures

used to assess young children, in particular culturally and linguistically diverse (CLD) children and children with disabilities, have compelled early educators to seek alternative methods of assessment for use with these groups of children (Buldu, 2010; MacDonald, 2007; Sigafoos, Cole, & McQuarter, 1987). The insufficiency of standardized measures has been attributed to (a) the lack of CLD and young children with severe disabilities in normative samples used to validate assessment instruments, (b) the inflexibility of test administration protocols (e.g., verbally state a reply), and (c) the uneven and unstable progression of skill development in young children (LaParo, Pianta, & Stulman, 2004; MacDonald, 2007). To address the need for more accurate assessment of young and diverse children, educators in early elementary and preschool settings have employed pedagogical documentation as a formative assessment tool, in place of or supplemental to standardized measures (Buldu, 2010; Carr, 2001; MacDonald, 2007). Research regarding the experiences of these early educators is disseminated in this section of the literature review.

Pedagogical documentation in early elementary settings. Results from recent empirical studies by Buldu (2010) and MacDonald (2007) attest to the usefulness of pedagogical documentation as a means for rendering a more accurate picture of the abilities and progress of CLD children and young children with special needs. Similar findings were reported across the heterogeneous educational (i.e., multicultural kindergarten classrooms) setting represented in these studies. For example, although educational instruction was given in English, 112 of the 141 children participating in Buldu's (2010) study of six kindergarten classrooms in the United Arab Emirates were

learning English as a secondary or tertiary language. Likewise, in MacDonald's (2007)

British Columbia based study, 21 of the 114 child participants were either culturally

diverse (of Aboriginal descent) or learning English as a second language. Diversity of

ability was also represented in MacDonald's work as 14 of the 114 child participants

received some form of learning assistance (i.e., special education services).

In both studies early educators reported that having a process such as pedagogical

documentation, which allowed them to "observe, capture, analyze, and interpret" (Buldu,

2010, p. 1447) the different ways each child learns without the constraint of the

predetermined boundaries inherent to standardized instruments, improved their ability to

see the whole child (MacDonald, 2007). One early educator shared that in relation to

standardized testing, pedagogical documentation helped to reveal connections the

students made with the presented materials that might not be evident otherwise

(MacDonald, 2007). Early educators also shared that knowledge produced through

pedagogical documentation better demonstrated the possible impact of the child's culture

and social environment on the child's thought processes in a manner that standardized

instruments are not sensitized to detect (Buldu, 2010; MacDonald, 2007).

Suárez and Daniels's (2009) studied pedagogical documentation on a smaller

scale in a case study of twin, six-year old CLD boys diagnosed with speech and language

impairments. Comparable to results from studies in international settings, the

implementation of pedagogical documentation in an inclusive elementary classroom in

the U.S. resulted in better understanding of the abilities and progress of young children

with disabilities. Suárez and Daniels (2009) documented and interpreted the boys' social

language skills in whole group and small group classroom interactions and therapy

sessions. The researchers, one of which was the speech therapist assigned to the twin

boys, created documentation using different media forms (e.g., audio, video,

photography, anecdotal notes) to gain "a more complete story of the twins' social

language skills and of what would be needed to promote progress" (p. 181). Photographs

and still pictures taken from the video recordings were shared with the twins, the

classroom teachers, the parents, and peers.

The wealth of data gained through pedagogical documentation did in fact produce

information that allowed teachers and therapist to identify and understand how and when

the twin boys engaged their social language skill. Additionally, therapists were able to

better construct targeted interventions based on the interests and interaction patterns of

the twins. The favorable results of the aforementioned studies suggest that pedagogical

documentation does in fact provide early educators with information essential for gaining

greater understanding of the strengths and needs of diverse populations of children. Early

educators identified the collaboration with other teachers and the reflection required by

the early educator and the child within the process of pedagogical documentation as the

factors that lead to the most insight on the possible interplay of the child's culture on the

child's learning.

The impact of pedagogical documentation on lesson planning. When used as

a method of formative assessment pedagogical documentation was found to produce

child-related information that supported individualizing lesson plans (Buldu, 2010;

MacDonald, 2007). Buldu (2010) attempted to determine how pedagogical

documentation contributed to (a) teacher lesson planning, (b) student knowledge acquisition, and (c) parent understanding of their child's classroom learning experiences. MacDonald (2007) focused on the process to facilitate parent-teacher communication and individualizing literacy instruction to kindergarten children. In each study researchers found that pedagogical documentation enabled the early educators to identify nuances of the child's learning process that were not made visible to them through other forms of assessment; where nuances were defined as the culturally and socially inspired ways the children used artistic materials, block play, dramatic play, images, and words to explore and learn (Buldu, 2010; MacDonald, 2007). Some early educators reported that they were able to shift their lesson plans and instruction from a standard 'one size fits all' approach (Buldu, 2010) to an approach similar to a Reggio Emilia styled approach attuned to detecting more of the proverbial 100 languages children use to acquire knowledge (Malaguzzi, 1998). The early educators then applied this information to creating individualized and meaningful lesson plans for the child.

Other early educators stated that although pedagogical documentation increased their awareness of the learning process, it was most beneficial in identifying the level of scaffolding and individualizing needed to advance the student towards meeting the expected outcomes (MacDonald, 2007). Early educators interviewed by MacDonald (2007) a year after beginning to implement pedagogical documentation offered that the process expanded their individualizing for students to include (a) modifying their expectations, (b) creating more open-ended assignments, and (c) more collaborative conferencing with the student as he or she worked to complete assignments. Interview

data further revealed how early educators using pedagogical documentation within a kindergarten classroom were able to use the products of the process to expand their capacity to assess and individualize for young CLD children and diverse children. Whereas the results of standardized forms of assessment made a static contribution to the overall education of the child, the results from the process of pedagogical documentation were used dynamically to shape ongoing instruction of the child. The knowledge produced from the process of pedagogical documentation (i.e., documentation panels and artifacts) helped to create a concrete and evolving collection of information on the child that was perpetually revisited by the teacher and the child. In addition to the public display of the documentation panels or artifact, the act of revisiting the artifacts further assisted the teacher in the individualization of lesson plans and instruction by providing a point of comparison between the past and current thought processes of the child.

Collaborating with parents to individualize planning. Individualizing to meet the needs of CLD children through the use of pedagogical documentation was further supported as it created more opportunities to include parent input into the development of lesson plans (Buldu, 2010; MacDonald, 2007). The process of pedagogical documentation provided a systematic means for educators to share information and receive input from families on the child's development. Through the documentation panels the early educators were able to communicate to parents, in significant detail, the daily learning experiences and activities of each child (MacDonald, 2007). Moreover, making the documentation panels available to parents through a variety of mediums, such as electronically, in printed newsletters, or in photo albums, increased parent

contributions to the planning process. Early educators found that parents who consistently reviewed the documentation panels and who were asked for feedback contributed more specific information on the interests and ability of the child, which early educators used to develop learning experiences customized for the child (Buldu, 2010).

Parents expressed similarly favorable perceptions of pedagogical documentation in regards to increasing their participation in the planning of their child's educational experiences. They stated that through studying the documentation panels and then sharing their feedback with the teacher they became more cognizant of the rationale guiding teacher choice of lessons and experiences for the child and of their child's progress (Buldu, 2010; MacDonald, 2007). Another benefit parents ascribed to the use of pedagogical documentation was an enhancement of their ability to support their child's learning by incorporating ideas and practices described within the documentation panels into their home environment.

As was evident in the affirmative results reported within the studies of pedagogical documentation included in this literature review, the process of pedagogical documentation supported early educators' attempts to better understand the needs and abilities of diverse populations of children. Less apparent in these findings were two factors: primarily, how children with disabilities, particularly children with severe disabilities or extremely compromised communication skills, were included in the process of pedagogical documentation and secondly, in what ways did their contributions impact the planning practices of early educators. Although children with diagnosed disabilities were included, but not the primary focus of the previously mentioned studies,

results specific to the impact of pedagogical documentation for supporting

individualizing for young children with disabilities were not reported. However, based

on existing knowledge and the positive results of the limited number of pedagogical

documentation studies that specifically addressed working with children with disabilities,

more research is needed. The studies regarding the role of pedagogical documentation

and its direct use with young children with disabilities are presented next.

Pedagogical documentation in inclusive preschool classrooms. Results from

studies of pedagogical documentation within inclusive preschool settings paralleled

findings of similar studies conducted in early elementary settings (Buldu, 2010; Cooney

& Buchanan, 2001; Katz & Galbraith, 2006; MacDonald, 2007; Suárez & Daniels, 2009).

Although the pedagogical documentation process used within each study varied slightly,

the core components of the process were consistent across studies and the utility of

pedagogical documentation in working with children with disabilities was supported.

Whereas Katz and Galbraith (2006) discussed a version of pedagogical documentation in

which teacher reflection was at the center of the process, Cooney and Buchanan (2001)

and other researchers' examinations of pedagogical documentation (Suárez & Daniels,

2009) placed teacher collaboration and group analysis of documentation artifacts at the

center of the process.

In Katz and Galbraith's (2006) study knowledge acquired about the child

through the application of pedagogical documentation helped the teachers facilitate social

interactions between children with disabilities and their typically developing peers.

Within Katz and Galbraith's study the participating teachers did not conduct the

pedagogical documentation observations. Instead, the teachers reflected on and analyzed

the observations in order to develop activities that supported the social development IEP

goals of the participating children with disabilities.

Analysis of teacher reflection of the observations and in depth interviews with

each of the four participating preschool teachers produced three important findings. First,

the process provided teachers with a holistic view of children's social development

competencies. Second, the frequency of the child with disabilities' social interactions

and the activities that precipitated the most social interaction were made evident through

pedagogical documentation. Lastly, the peers with which the child with disabilities

interacted most consistently and under which circumstance was also captured. Hence,

according to the teachers, the activities they created based on these findings appeared to

instigate more frequent and prolonged interactions between the child with disabilities and

typically developing peers. Teachers also reported feeling better able to help the child

reach his or her IEP goals.

Cooney and Buchanan's (2001) study explicitly examined the utility of

pedagogical documentation in making student progress towards IEP goals visible to

families, teachers, and the community. They examined changes to the assessment

practices of a speech therapist and other education specialist in Wyoming through the

production of documentation panels. The initial step of the process studies by Cooney

and Buchanan (2001) involved the speech therapist creating documentation artifacts from

photographs and notes collected during in class therapy sessions. The documentation

artifacts were then shared with teachers, the children with disabilities, and the families of

the children with disabilities. Their results indicate that not only did the process allow

the child to identify what they learned from the documented experience, pedagogical

documentation facilitated early educators' and special education professionals review and

planning of next steps in the learning experience of the child with disabilities.

Challenges of Pedagogical Documentation

In spite of benefits attributed to the use of pedagogical documentation in early

education and inclusive settings, implementing the process was not without challenges

for both in service and preservice early educators. Although employing pedagogical

documentation can produce comprehensive information on a students' thinking, the

process is time consuming and requires educators to be (a) collaborative, (b) proficient in

observing and analyzing child behavior and (c) knowledgeable about child development

theory (Fraser & Gestwicki, 2002; Grieshaber & Hatch, 2003; Kroeger & Cardy, 2006;

MacDonald, 2007).

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Conclusion

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More study is needed to ascertain how the process of pedagogical documentation,

when used as a formative assessment tool, impacts the individualizing practices of early

educators working in inclusive child care settings in the U.S. Taking into account the

growing number of children with disabilities receiving special education services within

inclusive settings, early educators many require additional supports and techniques to

meet the many and varied needs of children with disabilities (OSEP, 2014). Guided by

social learning theory, the current research explores whether the knowledge acquired by

early educators through observational learning, as it occurs within pedagogical

documentation, will alter their perceived or practical ability to engage in individualizing practices. Examining it within the theoretical framework supporting this study may also demonstrate how components within the environment, attributes of the early educator, and the behaviors being learned work together to produce changes in early educator individualizing behaviors. Moreover, the use of multiple qualitative methods to investigate teacher perspectives of changes to their individualizing practices as precipitated by training in and use of pedagogical documentation may result in additional knowledge on supporting individualization in preschool settings. Ultimately, this research may advance the field of early childhood special education towards providing young children with disabilities with instruction that is most aptly suited to meeting their unique and individual needs.

CHAPTER III

METHODOLOGY

Overview of Study Design

The three phase design of this study utilized qualitative methods to examine the impact of pedagogical documentation on the individualizing practices of participating early childhood educators. The qualitative methodology used in this study included (a) the use of multiple qualitative methods for data collection, (b) the collection of data within the natural context, (c) the researcher as the primary instrument for data collection and analysis, and (d) the inductive analysis of the data (Creswell, 2009; Maxwell, 2013; Merriam, 2009). Specific data collection methods included video recorded observations, field notes, a survey, and interviews. These methods were used to investigate the following research questions:

1. How do early educators working in inclusive settings interpret their experiences learning and implementing pedagogical documentation?

2. How do early educators adjust their individualizing behaviors due to their acquired knowledge and use of pedagogical documentation?

3. What meaning do early educators attribute to the knowledge gained of a child with disabilities through the use of pedagogical documentation?

The design also incorporated how the knowledge and beliefs of the researcher factored into the interpretation and trustworthiness of the data (Creswell, 2009; Maxwell, 2013; Patton, 2002).

The final research question guided the inquiry of each participants' perspective on the social validity of pedagogical documentation. Social validity is a subjective measure of (a) the social significance of the goals of the intervention, (b) the appropriateness of the intervention procedures for use within the target environment, and (c) the satisfaction of stakeholders with the effects of the intervention (Gresham & Lopez, 1996; Kazdin, 1977; Wolf, 1978). Within the current study, participating early educators were considered the primary group of stakeholders. A preponderance of empirical evidence indicates practices and interventions found socially valid by stakeholders have a higher likelihood of continued use after training or removal of implementation supports (Greenwood & Abbott, 2001; Gresham & Lopez, 1996; McDuffie & Scruggs, 2008).

Researcher as Instrument

Within qualitative methodology, the researcher is situated as the primary data collection instrument, whose skill in applying qualitative methods impact the trustworthiness and credibility of his or her research findings (Creswell, 2009: Merriam, 2009; Patton, 2002). Researcher characteristics impact all aspects of qualitative inquiry, from the researcher's subjectivity, to his or her professional interest in examining the selected research topic, to the data chosen and interpreted to support his or her findings. Scholars support practices including, but not limited to, reflexivity (Lincoln & Guba, 2000; Macbeth, 2001) and bracketing (Fischer, 2009; Janesick, 2000) as a means for

researchers to codify and demonstrate the steps taken to mediate the impact of the aforementioned characteristics on his or her research. Reflexivity is defined as a deconstructive exercise intended to highlight the numerous influences from an individual's life history (Macbeth, 2001). I have selected reflexivity to acknowledge my subjectivity. Moreover, following my reflexive statement, I have delineated the preparatory and procedural actions taken to ensure an accurate presentation of each participant's study related experiences.

My Experience and Subjectivity

According to Lincoln and Guba (2000), researchers must engage in reflexivity to thoroughly interpret the data collected by "reflecting on self as both an inquirer and responder" (p. 166). The roles I fulfilled throughout my life, as an early interventionist, a parent, preschool teacher, and a student shaped my perspective and contributed to the subjectivity that may influence my actions as a researcher. For example, my constructivist outlook and interest in individualization and pedagogical documentation are a result of fulfilling these roles. Recognizing my subjectivity helped me to analyze each role and acknowledge how each might influence my collection and interpretation of data. The goal of the following information is to provide a definitive image of my subjectivity.

My interest in individualizing practices stemmed from earlier teaching experiences with children with disabilities and my overwhelming sense of being unprepared to address their needs. My attempt to pair my desire to be effective with appropriate training inspired me to obtain a Master's degree in interdisciplinary early

childhood studies and conduct research on inclusion and preparing teachers to work with

children of all abilities. Through my completion of master's level course work and

research projects, I found that although evidence-based practices for individualizing exist,

early educators in the U.S. still felt unprepared to individualize for young children with

disabilities. This led me to examine processes used in other countries, such as

pedagogical documentation, to support and include all children. I was fascinated with the

process of pedagogical documentation and the reported positive results ascribed to

engaging in the process. Most interesting to me, as a constructivist, was the vital role the

child held in implementing the process. Further, the preschool environments in which

pedagogical documentation was typically implemented also reflected a constructivist

approach to teaching and learning.

In my assessment, authentic input from the child, as it occurs in pedagogical

documentation, was missing from current evidence-based individualizing strategies. This

belief could unduly influence my gathering, analysis, and interpretation of data collected

within the current study. Therefore, I took preparatory steps to increase my ability to

represent the targeted phenomena as perceived by the participants. First, I conducted an

exhaustive review of the literature regarding individualization and pedagogical

documentation. This allowed me to become knowledgeable of the existing literature base

on both topics. Second, throughout the study I sought the advice and guidance of the

expert qualitative researchers serving on my dissertation committee. Third, I developed

procedures and instruments, based on the widely accepted practices governing qualitative

data collection, for use in each phase of the current study. These procedures and instruments are defined within the remainder of this chapter.

The next two sections contain descriptions of the phases of the study and of the pedagogical documentation training modules used within the study. Then, the selection criteria for the research sites and participants are presented, followed by an explanation of the (a) measures, (b) procedures, and (c) data analyses selected to implement the study.

Phases of the Study

The central purpose of the three phases of this research was to gather information relevant to developing an in-depth understanding of the target phenomena. Phase I goals centered on identifying early educators' use of components of pedagogical documentation and individualizing practices prior to receiving training in pedagogical documentation. Data in Phase I was collected through: video recorded observations, field notes, a survey, and an interview.

During Phase II of the study participants completed Modules I and II of the pedagogical documentation training program. The primary purpose of the modules was to instruct participants on implementing the three-step pedagogical documentation process. Phase II data was collected by video recording participating early educators as they implemented the steps of pedagogical documentation.

Phase III involved observing participants to identify changes in their individualizing practices, and interviewing participants to gain their perspective on learning and applying the process of pedagogical documentation. Data collection methods used within Phase I, with the exception of the survey, were employed in Phase

III. This was warranted, given the almost identical purposes of data collection within Phases I and III. Whereas Phase I data collection measures obtained participants' pre-training knowledge and use of individualizing strategies and pedagogical documentation, Phase III data collection measures targeted their post training understanding and use of individualizing practices and pedagogical documentation. Therefore, the survey, which was developed to identify participants' a priori use of individualizing practices and pedagogical documentation, was excluded from Phase III. Table 2 contains a detailed timeline regarding the phases of the study.

Table 2

Overview of Study Phases, Data Collection Measures and Procedures

Measure	Definition	Rationale	Citation
		Phase I	
Observation	the systematic recording of a construct, behavior, or artifact as it occurs within its natural social setting	To gain direct knowledge of participants individualizing practices and components of pedagogical documentation prior to beginning Module I.	Creswell (2009); Marshall and Rossman (2006)
Field Notes	Documentation of researcher descriptions of the settings in which observations and interviews were conducted	To provide descriptive information on the observation and interview settings. To document insight gained by researcher during observations and interviews	Mulhall (2003); Patton (2002); Sanjek (1990)
Survey	A standardized and systematic non-threating form of data collection that used well-constructed, concise questions, designed to gain direct information on participants' attitudes, behaviors, and opinions	To gain information from participants on their current individualizing practices, and knowledge of pedagogical documentation prior to beginning pedagogical documentation training module.	Dillman, Smyth, and Christian (2007); Pulliam Phillips and Stawarski (2008); Shaughnessy et al. (2011)

Table 2

Cont.

Measure	Definition	Rationale	Citation
		Phase I (cont.)	
Interview	A process in which a researcher engaged participants in conversation to gain a participants' experiences, perspective, or understanding of topic under study	To confirm participant responses to individualizing practices survey. Additionally, to gain participants perspective on their individualizing practices and current knowledge of pedagogical documentation	deMarrais (2004)
		Phase II	
Multiple Choice Quiz		To assess participants' understanding of information presented in Module I and Module II.	
Written Feedback		To assess participants' competency in implementing pedagogical documentation.	
		Phase III	
Observation		To identify changes in participants' individualizing practices and use of pedagogical documentation after completion of Module II.	
Field Notes		Same as Phase I rationale.	
Interview		To ascertain participants' perspective on the impact of pedagogical documentation on their individualizing practices. The interview was also used to obtain each participants perspective on the social validity of pedagogical documentation.	deMarrais (2004)

Development of Pedagogical Documentation Training Modules

Two interactive training modules were developed for this study using Softchalk

software (2015). The history of pedagogical documentation and the instructions for

implementing the three-step process were presented in Module I and Module II, respectively. To complete the modules, participants (a) read embedded articles and selected textbook chapters, (b) watched videos, (c) listened to audio presentations related to the components of pedagogical documentation, and (d) implemented a total of three cycles of pedagogical documentation. The modules also contained opportunities for participants to demonstrate their competence in implementing the process.

During the spring of 2015, a pilot study was conducted for the purpose of assessing the effectiveness of the modules developed for use in the current study. Described below are changes made to the modules based on participant feedback. A brief description of the pilot study and changes made to the modules based on participant feedback are described below.

Pilot Study

Three early educators participated in the pilot study. Each participant (a) possessed a bachelor's degree or higher in early childhood education, (b) had three or more years of experience as a classroom teacher, and (c) served as the lead teacher within an inclusive preschool classroom serving three-to- five-year-old children. Interviews with the study participants revealed the need to make several changes to both modules. First, to improve accessibility to information embedded within the modules, several audio and video files were reformatted using more recent computer programs (such as iSpring). Second, several slides within Modules I and II were reworded to increase clarity. Lastly, the participants also suggested reducing the number of cycles of pedagogical documentation required to successfully complete Module II from six to three.

Participants reported confidence in their ability to implement pedagogical documentation after completing less than four cycles of the process. The results of observations also supported this recommendation. A detailed account of the final content of Module I and Module II follows.

Module I

Module I contained information on the history and philosophy of pedagogical documentation, a general description of how to implement the process in its entirety, and specific instruction on conducting pedagogical documentation observations. Within the first three slides participants learned (a) the purpose of Module I, (b) the instructions for navigating through both modules, and (c) the instructions for contacting the researcher. From the remaining 17 slides participants learned the definitions, terminology, and practices associated with the process of pedagogical documentation as it was applied previously in early education programs around the world. As participants completed the learning activities embedded in the module, such as analyzing observation photographs, they learned vital information on how observation and visible listening are used to help them recognize and access the various ways children communicate their understanding and thinking process to others (Malaguzzi, 1998; Rinaldi, 2006). In particular, participants learned the role of the 100 languages of children for increasing early educators' sensitivity to the aforementioned communication and thinking processes of children and the role of five elements (i.e., completeness, specificity, mood, directness, and objectivity) in producing in depth descriptions of observations. This module culminated with early educators conducting the first step of the pedagogical

documentation process within their classroom, and then producing a portion of the documentation artifact. The partially developed documentation artifact included the early educators' photographs and written descriptions of their observations of participating children. Each participant was provided a *Documentation Artifact Production Form*, containing the elements required to develop their observations and descriptions into a documentation artifact (see Appendix A). The process of pedagogical documentation, in its entirety, is described in Table 3.

Participant understanding of module content was assessed through two quizzes (i.e., one ten-question multiple choice and one to identify the term assessment) embedded within Module I. The results of these assessments were then applied to measuring participant readiness to advance through the module. Any participant who scored less than 90% on the quizzes was prompted to review the content and retake the quiz. Once the participant retook the quiz and achieved 90% or better, she was provided with the electronic link needed to access Module II.

Module II

Module II included step-by-step instructions on the components of the pedagogical documentation process as developed for the current study. These components consisted of (a) the use of photography to record children's work, (b) the use of open-ended questions, and (c) the use of visible listening skills as partially defined as the length of time the teacher gives the child to respond after asking a question and expanding the child's response by asking additional open-ended questions (Rinaldi, 2006). Specifically, participants learned how to use advanced questioning and listening

techniques to collaboratively analyze the pedagogical documentation artifact with the child and to apply the information to developing individualized lesson plans. After studying the steps of pedagogical documentation presented in Module II, participants implemented each step within their respective classrooms.

Early educators' comprehension of the process was assessed through a brief, multiple choice quiz at the end of the module. In addition, fidelity checks were conducted by reviewing the documentation artifacts and video recordings each participant produced of her implementation of the interpretation step (i.e., Step 2) of pedagogical documentation. The aforementioned manner of fidelity checking was conducted twice within the training period, during the first and final cycle of pedagogical documentation. A rubric, *the Pedagogical Documentation Collaborative Interpretation Form,* detailing the components needed to adequately implement Step 2 of pedagogical documentation was used to provide each participant with written and verbal feedback (see Appendix B).

Table 3

Pedagogical Documentation Process

Step	Title	Procedure
One	Observation	a) Observed and photographed child with disability, alone or with typically developing peer, engaging in a learning activity. b) Developed written description of observation. c) Created documentation artifact which included two to three pictures of observation and written description using the form provided in Appendix A. d) Electronically submitted documentation artifact to researcher.

Table 3

Cont.

Step	Title	Procedure
Two	Interpretation	a) Individual interpretation of documentation artifact occurred as early educators' added their questions and suppositions about the child's abilities and thinking into the documentation artifact. b) Early educator printed documentation artifact (pictures of observation on front, description and interpretation on back) c) Collaborative interpretation occurred during small group activity with participating children who were included in the observation. Early educator used questions based on their individual interpretation, as well as other open-ended questioning and visible listening to gain the participating children's interpretation of photographs included in documentation artifact, but focusing primarily on questioning the child with disabilities. The small group activity was video recorded by early educator and submitted. d) Child produced drawing of his or her interpretation of documentation artifact. e) Early educator added child's comments and quotes to documentation artifact.
Three	Implementation	a) The early educator reviewed and analyzed all the information collected (i.e., notes, video tape, documentation artifact). b) Early educator developed a lesson plan based on analysis of artifact. The lesson plan included a statement of individualization (a written statement of how the lesson plan was individualized based on information gained about the child during the first two steps of the process). c) Early educator electronically submitted lesson plan, documentation artifact to researcher. d) Early educator implemented lesson plan.

Site Selection Criteria

The study was conducted in inclusive three-to five-star licensed childcare centers that used an emergent or observation-based curriculum and operated within Alamance, Forsyth, or Guilford County, North Carolina. Possession of a three- to five-star license signifies the childcare program has exceeded minimum quality standards as delineated by the state of North Carolina's Division of Child Development (NCDCD). These standards are based on the degree to which the program exceeds minimum quality standards specifically related to (a) compliance history, (b) program standards, and (c) staff education (NCDCD, 2015). In comparison to other curricula, childcare programs using emergent or observation-based curricula were considered the best sites because these curricula typically encompass the flexibility and reflective teaching practices needed to implement pedagogical documentation (Shipley, 2008; Stacey, 2009, 2011). A maximum of four childcare centers operating under a three- to five-star rated license were selected for the study.

Environments found to support the optimal development of children with disabilities also influenced site selection. To be considered inclusive, the center needed at least one three- to five-year-old child with an active IEP and enrolled in an age appropriate class alongside his or her typically developing peers.

Site Descriptions

Three inclusive childcare centers located in the Piedmont region of North Carolina, one in Forsyth County and two in Guilford County, served as sites for the current study. Both counties are predominately urban, each with more than 87% of the

current population living outside rural areas. Racial demographics were also similar in these counties, with the minority population at 32.7% in Forsyth and 43.0% in Guilford (US Census, 2014). All three centers implemented The Creative Curriculum and maintained a five star rated license.

The Forsyth County site was a private center that received Smart Start and North Carolina Pre-Kindergarten Program (NC PreK) funding to support its two pre-K classrooms (Classroom A and Classroom B). Four additional classrooms for children ranging from infancy to preschool age were housed within the program. Each classroom was headed by a lead and an assistant teacher. All of the lead teachers held a bachelor's degree in early childhood education or a related field.

The two participating Guilford County centers included one Guilford County Schools Head Start program (Classroom C) and one church affiliated, non-profit program (Classroom D). Both centers are located in Greensboro, the third largest city in North Carolina.

The Head Start program had five classrooms and an enrollment of 95 children. All of the lead teachers, five in total, were African American and (a) held a bachelor's degree, (b) possessed a current North Carolina teaching license, and (c) was paired with an assistant teacher. Enrollment demographics indicate a minority majority, as 90% of the students were African American or Hispanic. The remainder of students were Caucasian or African.

The third program was a private, church affiliated center located in the downtown area of Greensboro, NC. The program offered full day and part day enrollment options

for infants through six-year-old children. With the exception of the transitional kindergarten classroom, each of the 12 full day or part day classrooms operated year-round. The transitional kindergarten classroom followed a traditional school year calendar. The program was staffed by 28 lead and assistant teachers and three full or part time floaters. Of the 31 total teaching staff, six were Caucasian and 25 were African American. Enrolled student racial demographics mirror those of Greensboro, as 67% of the students were Caucasian, and the remainder were either African American, Hispanic, or Asian.

Participant Selection Criteria

Four early educators who held bachelor's or master's degrees in child development, early childhood education, early childhood special education, or a related field (e.g., elementary education, psychology, or sociology), and who served as lead teacher within in inclusive preschool classrooms were recruited for this study. Educators' level of education has been linked to overall higher quality educational activities and improved literacy outcomes for children (Duncan & NICHD Early Child Care Research Network, 2003; St. Clair-Christman, Buell, & Gamel-McCormick, 2011; Weaver, 2002). Also, recruitment was limited to experienced teachers, defined as educators with three or more years of classroom experience, because they (a) may be more flexible in their approach to teaching, (b) may be better able to apply past teaching experiences to problem solving within the classroom, and (c) may be more comfortable individualizing or differentiating instruction to meet the needs of diverse learners (Kuzmic, 1994; Onafowora, 2005; Rogers & Babinski, 2002).

Early educators who held degrees unrelated to child development or education were not considered viable participants, as they may not possess the in-depth understanding of child development needed to implement pedagogical documentation.

Participants

Three of the four participants were African American, and one was Caucasian. Each of the four participating early educators were female and held a bachelor's degree. Two participants were actively pursuing a Master's degree in early childhood education. Of the four participants, three held a current North Carolina teaching license. Two participants had 5-7 years of experience, one had 24 years of experience and the fourth had taught for 28 years. Further, two participants had held their current position for 5-10 years, and the remaining two for 18 and 10 months respectively.

Students of participating early educators. All participants were lead teachers in classrooms consisting of 15 to 19 three-to-five-year-old children. Two of the four participants taught a diverse group of children, as their enrolled students consisted of almost equal numbers of African American, Caucasian, and Hispanic children. One participant's class was majority minority, with all but one student identified as African American, African, or Hispanic. The fourth participant's students were predominantly Caucasian. Almost equal numbers of male and female students were enrolled in each participants' classroom. While two participants had equal numbers of female and male children enrolled, two others had either a large majority of male or female student enrollment. Further, three participants had two and one participant had four children with disabilities currently enrolled in their class. Two male and one female participating

children with disabilities were receiving special education services for a speech or language disorder. The fourth child, a male, had a diagnosis of autism.

In addition to comparable educational backgrounds, the early educators shared similarities in their (a) instructional practices, (b) planning behaviors, (c) recent professional development experiences, and (d) competence in learning and implementing pedagogical documentation. Contextual information on and a narrative description of each participant in regard to these aspects is provided in the results section. The subsequent sections of this chapter cover (a) data collection measures, (b) data collection procedures, (c) data analysis, and (d) trustworthiness procedures used to conduct the current study.

Measures

A combination of four qualitative data collection measures was used to investigate the stated research questions, including (a) observations, (b) a survey, (c) interviews, and (d) field notes. Each of these measures are described below.

Observations

Observations are a primary data collection tool within qualitative research and accommodate the firsthand view of the phenomenon under study as it occurs within its natural context (Creswell, 2009; Merriam, 2009). As stated by Richards (2009), skill in conducting observations leads to "observing acutely and recording accurately" what has been witnessed (p. 41). To this end, the *Individualizing Practices Observation Form* was developed for this study. The form contains the definitions and steps to implementing the evidence-based individualizing practices that were observed, specifically (a) embedded

learning opportunities, (b) mand-modeling, (c) modeling, (d) modified time delay, and (e) supports and adaptions to materials or the environment (see Appendix C) (Bricker et al., 1998; Hancock & Kaiser, 1996; Horn & Banerjee, 2009; Horn et al., 2002; Ledford & Wolery, 2013; Neitzel & Wolery, 2009; Wolery et al., 1993). Other steps taken to support observation accuracy included video recordings of each Phase I and Phase III observation, which offered a less-intrusive way to collect data (Patton, 2002). An additional goal of these video recorded observations was to become familiar with the classroom environment and for the children to get accustomed to being recorded.

The selection of observation as one of four data collection measures also addressed shortcomings associated with relying on singular forms of qualitative data collection methods. Creswell (2009) and others report that whereas interviews offer valuable, yet decontextualized accounts of the targeted construct, observations allows for study of the construct as it occurs. Further, while the responses to interview questions may be inhibited by the willingness of the interviewee to share information, observations are not subject to such limitations (Creswell, 2009; Maxwell, 2013). Moreover, conducting observations provided the opportunity to capture changes in the interactional and environmental individualizing practices of participating early educators.

Early Childhood Individualizing Practices Survey

Dr. Margaret Gillis granted permission for the *Early Childhood Individualizing Practices Survey* to be adapted and used for this study (Gillis, 2011). Suggested by Pulliam, Phillips and Stawarski (2008) to be the most common form of data collection, surveys provide a viable means for gathering direct information on participants' attitudes,

behaviors, and opinions. Further, the use of surveys in research provides a standardized and systematic means for collecting data directly from a targeted population (Shaughnessy, Zechmeister, & Jeanne, 2011). The utility of surveys is further enhanced through the construction of well-formed, concise questions (Phillips & Stawarski, 2008). Surveys may also benefit study participants as they offer a non-threating means by which to communicate information or share opinions (Dillman et al., 2007).

The adapted survey consisted of 27 demographic and close-ended questions. Open-ended questions from the original survey pertaining to constructs not targeted within the current study were excluded. Within the first section of the survey, participants completed 13 content questions subdivided into the following categories (a) assessment practices (2), (b) collaborative practices (2), (c) individualizing practices (3), (d) pedagogical documentation (2), and (e) planning and instructional practices (4). In addition, participants completed 14 demographic questions (i.e., name, years of training, age category, etc.). Ten unaltered demographic questions from the original survey were incorporated into the current survey. However, the number of responses for three of the demographic questions was reduced because the response choices were not relevant to participating early educators. For example, the question regarding current position was adapted to include only positions related to teaching full time within a preschool classroom. Additionally, the response choices offered in the question requesting the participant's race were reduced to reflect the five primary races used by the U.S. Census Bureau (2014). A link to the adapted survey is included in Appendix D.

Based on Dillman et al.'s (2007) definition, nine of the 11 content questions within the second section of the *Early Childhood Individualizing Practices Survey* were classified as bipolar scalar (Gillis, 2011), meaning the question measures the direction and the intensity of a targeted construct. All of the questions were presented using a 5-point Likert scale to allow equal and balanced levels of response on either side of the neutral point. As stated by Krosnick and Fabrigar (1997), questions containing odd numbered Likert scale responses can deliver meaningful differences for analysis. The remaining two questions prompted the person completing the survey to add any additional comments about his or her assessment, instructional and individualizing practices.

This instrument was selected because, in its unaltered form the instrument addressed many of the constructs examined within the current study. For example, the *Early Childhood Individualizing Practices Survey* contains questions regarding the current individualizing and assessment practices of early education professionals. However, changes to the content and form of items within the survey were necessary to specifically address topics pertaining to this study. The adaptation of the individualizing survey entailed redesigning or replacing survey items found irrelevant to addressing the current research questions. Therefore, two closed-end questions pertaining to participant knowledge of pedagogical documentation, specifically the participants' current understanding and past use of pedagogical documentation and related practices (i.e., using photographs to document student learning) were added to the survey. In addition, two existing questions on individualizing practices were altered by including pedagogical

documentation as one of the response options. Current literature on survey development as well as existing literature on pedagogical documentation were used to develop the form and content of the two closed-end pedagogical documentation questions (Edwards et al., 2012; Rinaldi, 2006). Finally, the adapted survey was reviewed for form and content by experts in survey design and early education.

Moreover, the format of several questions was changed to compensate for the smaller number of educators who completed the survey. Whereas the original survey targeted a large population of educators, the distribution of the adapted survey was limited to less than ten participants, specifically the four early educators who participated in the current study. One of the original survey questions was adapted by reducing response choices from a five to a three point Likert scale, a response structure found to yield more accurate information when investigating an extremely limited number of participants (Dillman et al., 2007; Fowler & Cosenza, 2008). The questions added to the survey to examine the frequency of assessments were constructed based on a unipolar 9-point Likert scale. Unipolar questions are defined as incremental scale questions presenting response choices in ascending order, with the absence of the characteristic listed first (Dillman et al., 2007; Fowler & Cosenza, 2008). This form of question was selected to account for variations in the assessment schedules followed by different childcare programs.

Interviews

Two semi-structured interviews, which occurred in Phase I and Phase III respectively, were used to ascertain early educators' knowledge and use of

individualizing practices and to elicit the meaning they ascribed to their pedagogical

documentation related experiences. Phase III interviews also focused on determining the

social validity of pedagogical documentation. Described by Seidman (2006) as the

archetypal form of qualitative data collection, interviews allowed for the acquisition of

information not easily accessible through other forms of data collection. DeMarrais

(2004) succinctly defined interviewing as "a process in which a researcher and participant

engage in a conversation focused on questions related to a research study." (p. 55)

Selecting semi-structured interviews as a data collection method facilitated query for

specific information, as well as ensured the flexibility to follow emergent lines of inquiry

(DeMarrais, 2004; Seidman, 2006). Audio recordings and field notes were taken during

Phase one and Phase III interviews to ensure the accurate collection of the data.

 Phase I interview questions. In order to triangulate Phase I observation and

survey data, Phase I interview questions were developed based on data collected using

the former and the latter method. Specifically, each participant was asked to confirm or

explain his or her use of individualizing practices as captured during Phase I

observations. Moreover, how many additional interview questions were taken verbatim

from the survey to provide points of comparison between participant survey and

interview responses. A total of eight preselected interview questions were asked in Phase

I that addressed (a) individualizing practices (4), (b) professional development (1), and

(c) and lesson planning (3). In addition, unstructured questions based on participant

responses were also used. The list of structured questions that guided Phase I interviews

can be found in Appendix E.

Phase 3 interview questions. The initial 10 Phase 3 interview questions were developed from the literature on individualization, pedagogical documentation, and behavior change in teachers. Topics addressed within the three initial individualization questions pertained to the planning and instructional behaviors of the early educator. The goal of the four questions regarding pedagogical documentation was to acquire information on participants' overall experience with the module as well as the practical application of pedagogical documentation in their respective classrooms. The remaining three behavior focused questions shaped the investigation of changes in the educators' attitudes and behaviors, specifically their views regarding observing children and changes in the way they approach questioning children. In order to entice participants to provide as much detail as possible, two of the initial questions regarding pedagogical documentation and individualizing practices, queried for multiple aspects of each subject. For example, the body of the initial pedagogical documentation question was designed to gain an understanding of how learning to implement the process impacted the early educator's ability (a) to plan in general, (b) to plan for the child with disabilities, and (c) to plan to meet the IEP goals of the child with disabilities. The final set of questions were designed to elicit participant perspectives on the social validity of pedagogical documentation.

Field Notes

Field notes are generally considered to be an integral part of conducting qualitative research (Mulhall, 2003; Patton, 2002; Sanjek, 1990). According to Patton (2002), field notes are vitally important to creating meaningful written records of

observation data. He states, "Field notes contain the description of what has been

observed and should contain everything the researcher believes to be note worthy."

(Patton, 2002, p. 302). Further, field notes should also contain the observer's reactions

and experiences during the observation, as the experiences of the observer are considered

a meaningful part of the data (Patton, 2002). Analogous in purpose to transcripts of

interviews, well-written, organized field notes also facilitate the subsequent analysis of

observation data (Merriam, 2009). Moreover, the benefits of field notes extend beyond

the data collection and analysis phases of a research project by providing the future

consumer of the research with contextual information on the research data.

Field notes were used to collect descriptive information from Phase I and Phase

III observations and interviews. Further, researcher reflections and insights on the former

and the latter were described within the field notes. The collection of field notes

consistently occurred prior to and immediately following interviews and observations.

Due to the researcher's role as the primary video recorder for each observation, field note

production during actual observations was limited to the intervals in between the

recording of the designated small and large group activities. The Field Note Collection

Form was developed to organize and document (a) dates, (b) descriptions of setting and

participants, and (c) researcher reflections during observations and interviews (see

Appendix F). Detailed in the subsequent section are the purposefully constructed

procedures developed to implement the study.

Procedures

Data collection for the current study was executed across three phases. In this section are the procedures for (a) participant recruitment, (b) site selection, (c) data collection, and (d) data analysis that occurred during each phase of the study.

Researcher Developed Instruments

Three measures were developed to facilitate implementing the procedures that guided this study. Each of the instruments (a) *the Individualizing Practices Observation Form*, (b) *the Documentation Artifact Production Form*, and (c) *the Pedagogical Documentation Collaborative Interpretation Checklist*, was designed using information from current literature on individualization and pedagogical documentation (see Appendices D, A, and C, respectively). For example, only individualizing practices that are supported by empirically based evidence were defined within the observation form (Grisham-Brown, Schuster, Hemmeter, & Collins, 2002; Horn et al., 2002; Odom, 2002). Further, the components needed to competently implement pedagogical documentation were identified through study of research done by Fleet et al. (2006), Forman and Hall (2005), and Rinaldi (2004). The aforementioned forms and checklists were used to establish the credibility of the observation data and participant fidelity in implementing the various steps of pedagogical documentation.

Phase I Procedures

Phase I commenced with recruitment of participants and ended with the completion of the Phase I interview. After consenting to participant in the study, each early educator was observed and then completed the individualizing practices survey

prior to the interview. Phase I data collection measures included a series of video recorded observations, an adapted version of the *Early Childhood Individualizing Practices Survey* (Gillis, 2011), and a semi-structured interview. The *Individualizing Practices Observation Form* (see Appendix C) was developed for the study and used to document and analyze the individualizing strategies and other target behaviors captured within Phase I video recorded observations. Participant level of fidelity in implementing Step 1 of pedagogical documentation was noted on the *Documentation Artifact Production Form.*

Recruitment. Face-to face or electronic communication (i.e., phone calls and emails) with directors of three to five-star licensed child care programs in two counties was initiated to gain permission to distribute and display recruitment flyers within their centers. When granted permission to advertise the study in the center, one or both of the following steps were taken: study related flyers were delivered for display or distribution to teachers, or, a meeting was scheduled to discuss the study with the director and/or teaching staff. Individual teachers who were interested in participating were instructed to contact the researcher by email or by phone using the information listed in the flyer (see Appendix G). Next, individual meetings with qualified and interested early educators were scheduled to (a) discuss the purpose of the study, (b) describe participant rights and responsibilities, (c) explain the strategies to be used to ensure participant confidentiality, and (d) detail participant compensation as outlined in the participant consent form (see Appendix H). If the potential participant was agreeable to the terms and conditions of the

study as discussed and contained within the consent form, he or she was included in the study.

In addition, after reading and signing the consent form, participants were given a packet of three study related forms to distribute to the parents of students enrolled in their classrooms. The packet of forms contained a (a) flyer describing the study, (b) consent form for a minor to participate and (c) consent form to allow video recording of a non-participant minor (see Appendices H, K, and L, respectively).

Consent forms for participating children. In order to implement the study as designed, a minimum of two participating children was required to allow for observations of the child with disabilities interacting with peers during typical classroom activities. Further, the primary purpose of involving the typically developing child in the current study was to interact with and to model behaviors for the child with disabilities, such as asking or responding to questions, during the collaborative analysis component of the pedagogical documentation process. Therefore, prior to beginning the study, signed consent forms were secured from a minimum of two parents per classroom, including a minimum of one parent of the child with a disability. Parents who granted permission for their child to participate in the study returned a signed copy of the consent for a minor to participate form. In addition, parents who neither wanted their child to participate nor consent to the inclusion of their child in any study related video recordings were asked to complete and return the non-participant minor consent form. All of the completed and submitted consent forms received were copied and returned to parents electronically and in hard copy form. Data collection began immediately after receipt of at least two signed

consent forms. Appendices I, K, and L contain copies of each the forms discussed in the preceding section. If the participating early educator was unable to obtain consent from at least two families, then he or she was excluded from the study.

  Observation procedures. A total of six video recorded observations were conducted over the course of this study: three times each during Phase I and Phase III, as early educators conducted small and large group activities. A variety of factors supported the selection of observation to collect study-related data. First, video recorded observation was chosen to identify the current individualizing practices and use of components of pedagogical documentation by participating early educators. The video recorded observations helped determine (a) the types of individualizing strategies, (b) the frequency of use of individualizing strategies, (c) the number of open-ended questions used by the early educators, and (d) the use of visible listening by the early educators when conducting group activities with participating children. Second, because early educator self-reported practices are not always congruent with his or her actual practices (Tiano & McNiel, 2006), observation data was used to compare the early educators' actual classroom use of individualizing practices with the responses given by them on the *Early Childhood Individualizing Practices Survey* (Gillis, 2011).

  While conducting the video recorded observations, the researcher took the role of complete non participant observer. This allowed the recording of the targeted constructs without excessive interference with the constructs' natural occurrence (Creswell, 2009; Merriam, 2009). In order to remain hidden from the group being observed, when possible the observations were recorded from behind a one-way mirror. When

circumstance necessitated recording observations within the classroom, there was no interaction with the participating early educators throughout the observation.

Observation procedures within Phase I. Each early educator was observed for a minimum of one hour across three days within Phase I of the study while implementing three small group and three large group activities. A meeting with each participating teacher was scheduled prior to conducting the Phase I observations. The length of the observation was based on the activity length recommended within developmentally appropriate practice (DAP) guidelines (Bredekamp & Copple, 1997). DAP is defined as the intentional and targeted application of child development knowledge to creating practices and environments to support the optimal education of young children (Bredekamp & Copple, 1997; Copple & Bredekamp, 2009). Among the recommendations for creating these supportive learning environments is that activity length should reflect the ability, developmental level, and intellectual level of the children in the classroom. The suggested activity length for small and large group activities for three-to-five year olds ranges from a minimum of 10 minutes to 20 minutes or more respectively (Gestwicki, 1999). However, the actual length of the observation of the aforementioned activities varied, due to teacher habits or other unforeseen circumstances affecting the implementation of typical classroom activities. The proposed minimum number of observation hours was based on the small and large group activity lengths for preschool age children recommended within developmentally appropriate practices. The Phase I observations were conducted during scheduled morning activities, which typically included child directed free play, structured activities, and outdoor activities.

The observations occurred during teacher directed structured small and large group

activities. For example, the observations included recording teacher implementation of a

planned math or reading activity or teacher interactions with the children during a daily

large group activity. These observations were conducted for the duration of the

scheduled activities as delineated in the participating teachers posted daily schedule. For

instance, morning activities in the average child care program are scheduled for a period

of approximately three hours, beginning with the arrival of the first student and extending

to lunch time. See Table 3 on pages 69–70 for the schedule of observations and the

rationale guiding the observations and each data collection method.

Observation field notes. Field notes were collected prior to entering and upon

exiting the setting in which the observation occurred using the field notes form (see

Appendix F). These notes were also taken during the intervals between the recording of

small and large group activities. Included in the field notes was descriptive information

regarding the setting and participants captured within each video recorded observation

session. To facilitate later analysis of the data, researcher reactions and feelings

regarding the observation were also included in the field notes.

Survey procedures. The survey used in this study provided a means for

participants to disclose background and demographic information. An additional focus of

the survey was to allow participants to share information on their individualizing

practices and knowledge of pedagogical documentation prior to completing the modules.

Immediately following completion of Phase I observations, the participants were sent an

email containing an electronic link to the individualizing practices survey. The survey

took approximately 30 minutes to complete. After responding to 12 demographic questions the participating early educators responded to 15 questions regarding their current use of individualizing strategies and knowledge of pedagogical documentation. They were also encouraged to complete the survey within one week of receiving the link, as they needed to submit the survey prior to scheduling the Phase I interview. Each participant was contacted by email or by phone encouraging them to complete the survey if they had not done so within seven days of receiving the survey link.

Interview procedures. After review of the completed individualizing survey, the Phase I interviews were scheduled at a time that was convenient for the participant. In addition to using preselected questions during the interview, each participant was asked questions based on his or her responses to survey items. This manner of questioning allowed the participant to expand upon or clarify his or her survey responses. Each Phase 1 interview was completed in 30 minutes or less.

As characteristic of semi-structured interviews, responses of the participant, in addition to preselected questions, were used to gain information on the participant's perspectives and experiences. After interview procedures, including (a) gaining verbal permission to audio record the interview, (b) reiterating the data confidentiality measures, and (c) sharing the purpose of taking field notes during the interview (see Appendix F), were explained to the participant, she was asked the first set of preselected questions. Within the final instructions to each participant, confidentiality measures were reiterated and the next steps of the study were described. At the conclusion of the interview each

participant was presented with the unique user name and password needed to access

Module I of the training module.

   Interview field notes. Throughout the interview, the Field Notes Form (Appendix

F) was used to take descriptive and reflective field notes. Contained within the notes was

demographic information on the interviewee as well as descriptions of the setting in

which the interview occurred.

Phase II Procedures

   Phase II, in its entirety, consisted of participants completing Module I and Module

II of the pedagogical documentation modules. Within the allotted timeframe,

approximately five weeks, each participant was advised and encouraged to complete both

modules. It should be noted that data collected during this phase was used to address

participant understanding of the information in the modules and competency in

implementing pedagogical documentation. Therefore, Phase II data was not used to

address the substantive research questions.

   Within Phase II, participants video recorded their implementation of Step 2 of

pedagogical documentation. The *Pedagogical Documentation Collaborative*

Interpretation Checklist (PDCIC) was used to review and provide participants with

feedback on their implementation of Step 2. Assessment of Step 3 entailed review of

participant produced lesson plans for a statement on how the individualization included in

the lesson plan was related to information produced on the child through pedagogical

documentation.

Module I. Phase 2 commenced after participants were given access to Module I. The email to participants containing the module link also contained reminders of the suggested timeline for completing the module. They were also encouraged familiarize themselves with the items in the equipment package as the package held materials required to learn and implement pedagogical documentation.

Step 1 of pedagogical documentation. To begin the first step of pedagogical documentation the participants observed and photographed the child with disabilities as the child engages in learning activities with the other children participating in the study. Participants were required to provide a written description of the observation. Using the provided documentation artifact form (see Appendix A) participants created a partial documentation artifact, which consisting of two to three photographs of the observation and the participants' description of the observation. Afterwards, each participant electronically submitted or provided a hard copy of the documentation artifact for review and feedback. Participants who produced a documentation artifact containing the required elements (i.e., completeness, specificity, mood, directness, and objectivity) as defined on the documentation artifact form were given access to Module II. For example, exemplary documentation artifacts contained direct quotes from the child and detailed descriptions of the setting in which the observation occurred. If the submitted documentation artifact does not contain a minimum of 90% of the required elements, the participant was instructed to revise and resubmit the artifact with the added required information. All participants received constructive feedback on their documentation artifact. The production of the documentation artifact served as the final Module I

assessment. The first two assessment activities are described next. After participants

completed Module I, they gained access to Module II.

Module I assessment procedures. Participants also completed three assessment

activities to determine their understanding of information presented in Module I. The

first assessment activity entailed defining key terms and concepts presented within the

first half of Module I. The second assessment was a multiple choice quiz designed to

gauge participant understanding of the information presented at the midpoint of Module

I. After the participant completed each assessment, the results were recorded and stored

within the score center link of the Softchalk software. Participants who score less than

90% on any of the assessments were required to review the material and retake the quiz.

Module II procedures. Module II required participants to successfully

implement Steps Two and Three of pedagogical documentation. As they worked to

complete Module II, each participant received weekly email inquiring about her progress

and to offer guidance and support.

Step two of pedagogical documentation. Working from the information used to

develop the documentation artifact (i.e., photographs and description of the Step 1

observation), participants developed an individual interpretation of the documentation

artifact. Individual interpretation was accomplished by the participant adding their

observation based questions about the child to the partially completed documentation

artifact. Upon completion of the individual interpretation, participants conducted the

collaborative interpretation of the artifact within a small group activity with the children

participating in the study. Participants were instructed to take notes and video record,

using the provided camera, the small group activity in which the collaborative

interpretation occurred. Collaborative interpretation entails using open-ended questions

and visible listening skills to gain the children's explanation of their theories and thought

processes captured within the documentation artifact (i.e., the photographed observation

of the child). Although the participants questioned each child during the collaborative

interpretation activity, the participants focused specifically on the responses and

interpretations of the child with disabilities. To supplement the children's verbal

explanation, participants instructed each child to draw a visual representation of his or her

verbal explanation. The procedure for this step of the study is described within the Table

3.

     Step 3 of pedagogical documentation. This step required the analysis and

application of all the information gathered in the first two steps of the process to creating

a lesson plan designed to incorporate the identified learning process of the child with

disabilities. Participants were directed to use (a) their individual interpretation of the

observation, (b) the collaborative interpretation, (c) their personal knowledge of child,

and (d) their knowledge of child development to produce a lesson plan or activity

individualized to meet the needs of the child with disabilities. Participants were allowed

to use the lesson planning form required by their respective childcare program. However,

they were instructed to indicate in writing how the lesson plan or the implementation of

the lesson plan was individualized to meet the needs of the child with disabilities and to

describe how the planned individualization related to the information gained about the

child through the process of pedagogical documentation. Once completed, participants

submitted an electronic or hard copy of the lesson plan. The efforts required of the participants in order to complete the documentation artifact are described below.

Documentation artifact completion. In addition to participants using the analysis to create the lesson plan, the results of the analysis were added to the documentation artifact. In addition to the observation photographs and observation descriptions, a complete documentation artifact contained (a) the observation photographs, (b) observation description and interpretation, (c) a summary of the differences and similarities between the information produced from the individual and the collaborative interpretation, (d) answers to questions included in the individual interpretation by the teacher regarding the child's thinking and development, and (e) a description of how all the above mentioned information was applied to developing an individualized lesson plan.

Module II assessment procedures. Module II contained three assessment activities. First, the PDCIC (see Appendix B) was used to provide each participant with feedback on his or her video recorded implementation of Step 2 of pedagogical documentation. Participants met the competency requirement for Step 2 if his or her implementation of Step 2 contained the required components as stated on the PDCIC. The second assessment was conducted to determine the degree to which the individualization stated in the lesson plan was related to information produced within the process of pedagogical documentation. Participants submitted a total of three lesson plans for review. The individualization component of the lesson plan was assessed on a *yes* or *no* scale and any lesson plans that contained individualization not clearly linked to

information included in the documentation artifact were returned to the participant for revision. Requests for revisions were limited to asking the participants to include in the lesson plan a stronger link between the documentation information and the proposed individualization. The final assessment, a multiple choice quiz, measured participant understanding of information presented throughout Module II. Similar to assessment activities in Module I, a 90% or better was required to complete Module II. Phase II of the study concluded after each participant successfully completed the final assessment and submitted the third lesson plan.

Phase III Procedures

The purpose of Phase III was to capture changes in participants' individualizing practices and to gain their perspective on using pedagogical documentation within their inclusive classroom setting. Phase III observations were followed by in depth interviews with participating early educators. Finally, throughout Phases Three, field notes were collected prior to and immediately following each observation and interview.

Phase III observation procedures. As with Phase I observations, one goal of Phase III observations was to capture changes to the individualizing practices of participating early educators. The participants were video recorded for a minimum of one non-continuous hour as they engaged in small and large group activities. Specifically, one small group and one large group activity were recorded during each of the three observations sessions. All activities were recorded until the participating teacher dismissed all the children from the activity.

Small and large group observations. In form, Phase III small and large group observations mirrored observations in Phase I. These observations (a) lasted for the duration of the activity, (b) were video recorded, and (c) were scheduled at the convenience of the early educator. However, one aspect differentiates observations in Phase III from those that occurred in Phase I. Whereas Phase I observations captured typical teacher developed small and large group activities, Phase 3 observations captured implementation of at least three activities to investigate the impact of the pedagogical documentation training developed by the participants using information gained during the process of learning the steps of pedagogical documentation. In order to capture changes to the individualizing practices of participating early educators, it was necessary to observe these practices during activities developed using their typical lesson planning method. Given that activities developed as a result of pedagogical documentation specifically targeted individualizing for the child with disabilities, observation of activities that were not designed for the same purpose were thought to provide additional insight.

Phase III interview procedures. After the observations, each participant was interviewed (a) to further explore changes to their individualizing practices, (b) to gain their perspectives on pedagogical documentation, and (c) to ascertain the level of social validity they assign to the process of pedagogical documentation. The procedure for Phase III interviews mirrored the procedure for Phase I interviews. However, the Phase III interviews were considerably longer, approximately 60 minutes each, as they were guided by several open-ended questions (see Appendix E) aimed at eliciting more

detailed and thoughtful responses. When scheduling the Phase III interview, participants were advised of the expected duration of the interview.

Phase III observation and interview field note procedures. Phase III fields notes were produced in the same manner as described for field note production in the preceding phases of the current study. The complete procedure for conducting the study is explained in Table 2.

Data Analysis Procedures

The analysis of the observation, survey, interview, and field note data consisted of frequency counts, descriptive analyses, and data coding to understand how the data relates to addressing the research questions. Frequency counts represent a simple and easy method to quantify the frequency of target behaviors. Descriptive analysis was also used to summarize the responses to demographic and content questions in the survey. Finally, transcription and coding of interview data and field notes, were used to identify themes pertinent to addressing the research questions. To protect the confidentiality of the participants and their students, they were given pseudonyms during transcription of the interviews and later by assigning an identification number to each completed transcript. Additionally, coding indices were developed to further assist with analysis of each set of data. These indices can be found in Appendix L and M. After a statement highlighting the application of the analysis to answering the research questions, the specific features of each analysis and the process by which they were executed are discussed.

Application of Analyses to Addressing the Research Questions

The primary purpose of this research project was to understand the impact of pedagogical documentation on the individualizing practices of early educators, with impact defined as changes in (a) the planning or instructional practices, (b) nature and frequency in use of individualizing strategies, (b) the verbal interactions between the teacher and child with disabilities, and (c) teacher perception of changes to his or her individualizing practices. Although this research was not designed to establish a causal relationship between learning and using pedagogical documentation and use of evidence based individualizing strategies, it did seek to explore all aspects of individualizing practices, which may include use of evidence based individualizing strategies as shown in previous studies.

The results of the analyzed data were applied to highlighting the impact of pedagogical documentation on the individualizing practices of early educators. The observation data from Phases One and Three were examined and compared in order to detect any notable differences in the frequency in use of individualizing strategies and in use of components of pedagogical documentation. The descriptive information derived from analysis of the survey was applied to contextualizing the demographic traits of the study participants and how these traits, such as education level or years of classroom experience, relate to and inform the research questions. Analyzed survey data regarding the participant's individualizing practices served to support or to challenge conclusions drawn from observations and interviews conducted during the first and last phases of the study. The interview data and field notes were applied to gaining a collective view and

highlighting common themes expressed by the participants on changes to their

individualizing practices they attribute to implementing pedagogical documentation. It

should be noted that Phase II data were intentionally excluded from the final analysis, as

the assessment and observation data collected during that phase served only to measure

fidelity of implementation. Table 4 contains a summary of each analysis method.

Table 4

Data Analysis

Data Collection Measure	Analysis Procedure
Observation	Frequency counts
Field Notes	Coding
Survey	Descriptive analysis
Interviews	Transcription Review transcripts Constant Comparative Method

Observation Analysis

A frequency count was conducted to quantify each participant's use of

individualizing practices and components of pedagogical documentation. Detailed

descriptions of each individualizing practice, in addition to descriptions of the

components of pedagogical documentation, were delineated within the Individualizing

Practices Observation Guide (see Appendix C). Components of pedagogical

documentation include the use of (a) open-ended questions, (b) visible listening, and (c)

photography to record children's work. Analysis of the video recorded observations also included a review of the field notes taken prior to and immediately following each observation.

Phase I and Phase III video recorded observations were reviewed two times. Two viewings were necessary to adequately detect the many behaviors targeted within the video recorded observations. The first viewing focused on detecting and tallying participant use of individualizing strategies and the second focused on components of pedagogical documentation, specifically use of open-ended questions, visible listening skills, and photography. Definitions and criteria for identifying each component are provided in Table 5. To perform the frequency count, each time the observed behavior occurred the time, as indicated by the time stamp within the video recording, was noted in the appropriate column on the Individualizing Practices Observation Guide. Use of the time stamp as a tally mark facilitated the establishment of intercoder reliability. Intercoder agreement for observation and all Phase I and Phase III data are discussed in the trustworthiness section at the end of this chapter.

Table 5

Definitions of Pedagogical Documentation Components

Component	Definition	Criteria
Open-ended Question	A question that requires the child to express and elaborate on his or her thinking and invites a longer response (Powell & Wright, 2008)	• Early educator repeats open-ended question to child but changes inflection or word order.

Table 5

Cont.

Component	Definition	Criteria
Open-ended Question (cont.)		• Early educator asks open-ended question to child participating in observed activity • Early educator askes complete open-ended question to participating child
Visible Listening	The act of listening and responding that requires questioning and reacting both physically, and affectively to the words and actions of children. The adult intently listens and allows the child ample time to form and respond to questions (Clark & Moss, 2011; Malaguzzi, 1998; Rinaldi, 2006).	• Early educator gives child at least five seconds to respond or waits at least five seconds before asking additional questions • Early educator responds to child's question using an open-ended question
Photography		• Use of camera to document learning during observation

Field Note Analysis

The information captured within the field notes added depth and detail to observation and interview data. For example, the coded field notes provided more contextual information to the frequency count used to analyze observation data. In addition, analysis of these notes made evident commonalities within and across the observation and interview data.

A four-step process was used for the initial analysis of the field notes. The first two steps entailed rewriting the field notes into full sentences and then categorizing each sentence as either the researcher's (a) analysis, (b) description, or (c) reflection regarding an observation or interview. The three aforementioned categories served as the initial codes and were based on the purpose of field notes as described within the literature (Mulhall, 2003; Patton, 2002). A sentence was categorized as analysis if it connected occurrences during observations or interviews to existing theories or researcher suppositions. Sentences that provided descriptive or logistical information were categorized as description. Finally, any sentences referencing emotions or reactions to an observation were placed in the feelings category. After the preceding process was applied to all of the observation field notes, the secondary analysis was implemented

A secondary review of the categorized field notes resulted in four additional codes that addressed (a) teacher practices, (b) developmentally appropriate practice (DAP), (c) individualizing, and (d) child engagement. A field note coding index is available in Appendix M. The information drawn from the field notes was then compared with observation and interview data.

Survey Analysis

The descriptive and demographic information on the participants was obtained from the Early Childhood Individualizing Practices survey. Analysis entailed examining and coding the responses of each participating early educator. Subsequent to coding the demographic survey items, the content specific data regarding participant (a) assessment, (b) individualizing, (c) instructional, (d) planning practices, and (e) use of pedagogical

documentation was entered into Microsoft Excel statistical computer program for analysis. Excel statistical software was used to calculate means and further categorize the data. Although Qualtrics, the electronic program used to develop and distribute the survey, has analytical capability, for continuity all quantifiable data was exported to Excel.

Interview Analysis

A constant comparative method (CCM) was used to identify patterns in coded data derived from the transcribed interviews (Corbin & Strauss, 2008; Fram, 2013; Merriam, 2009). CCM was selected to compare and contrast segments of interview data that might help answer the three research questions (Merriam, 2009). In spite of the considerable empirical connect between CCM and grounded theory, literature spanning many academic fields demonstrate the use of CCM for purposes other than developing a grounded theory (DeSimone & Parmar, 2006; Hallberg & Carlsson, 1993; Merriam, 2009; Stewart, 2011). Through the use of CCM, data initially placed within 13 initial categories was reorganized into 23 codes, and ultimately four themes that provided a better understanding of pedagogical documentation.

Contant comparative method. Creswell's (2013) six-step guidelines for CCM identify Step 1 as organizing and preparing the data for analysis. Thus, each of the recorded interviews was transcribed and coded. The process of transcribing each interview also increased familiarity with interview data. This was done in accordance with the work of Briggs (1986) and other qualitative researchers who stated researchers should complete their own transcription in order to develop an intimate understanding of

the interview data (Galletta, 2013; Seidman, 2006). Prior to reading the transcripts, each line of transcribed text was numbered to facilitate quickly referencing coded statements or words.

Steps 2 and 3 of the process, reading and coding, served to identify meaningful information contained within the transcribed interview data (Creswell, 2013). Therefore, topics addressed within the research questions were used to categorize data from Phase I and Phase III interview transcripts. Next, each category, thirteen in total, was assigned a color code. The text color of the coded data were then changed to the color assigned to the corresponding theme category. In Step 4, codes developed in Step 3 were grouped into the five primary, 12 secondary, and four tertiary themes that further shaped the analysis (see Appendix M). As stated by Creswell (2009), Step 5 advances "how the descriptions and themes will be *represented*" (p. 189) within the research project. During Step 5 direct quotes and statements highlighted within the transcript which exemplified or supported the themes of the qualitative narrative were selected (see Figure 3). Interpretation of the interview data occurred in Step 6 of CCM data analysis. At that point, the themes that emerged from the data were compared with the literature base on pedagogical documentation and individualization.
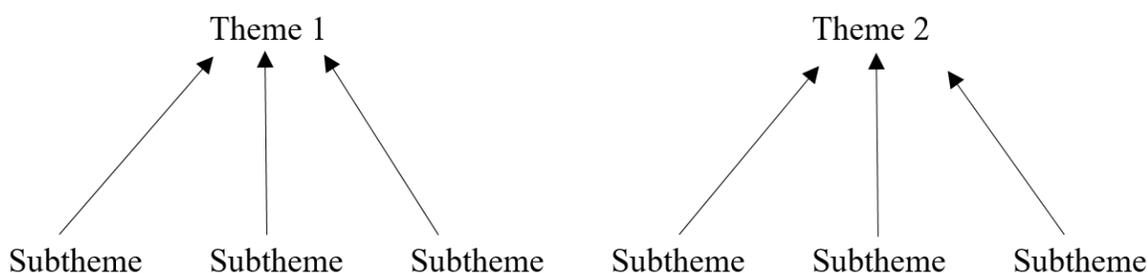
Figure 3. Theme Classification Tree.

Trustworthiness

Trustworthiness is the term used in reference to efforts made by researchers to establish the internal and external validity of qualitative research (Guba & Lincoln, 1994; Lincoln & Guba, 2000). The steps taken to establish trustworthiness in this study included methodological triangulation, member checking, and the establishment of inter-rater agreement on all collected data. These steps, as applied in this study are detailed in the next section.

Triangulation

Triangulation, as defined by Stake (2005) is a crucial means for establishing validity through arriving at the same or similar interpretation of the data by at least three independent approaches. Methodological triangulation was used to gauge the credibility and accuracy of findings produced within the current study (Creswell, 2009; Lincoln & Guba, 2000). Evidence of methodological triangulation can be found in the use of observations, interviews, and a survey for the pre- and post-training collection of data. Further, a rich and multi-faceted presentation of early educators' experiences with pedagogical documentation was created through investigating points of convergence or divergence in the data that was collected from multiple sources.

Member Checking

Member checking is defined as a quality control process that facilitates establishing the accuracy and integrity of interview data (Byrne, 2001; Doyle, 2007; Lincoln & Guba, 1985). The congruency of data analysis with each participants' experience with pedagogical documentation was confirmed in two ways. First, after a

research assistant compared Phase I and Phase III interview transcripts with the corresponding audio recordings of the interviews, each participant received an electronic copy of their interviews for review. Second, the descriptive summary of each participant developed from the survey and interviews was reviewed for accuracy by each participant.

Intercoder Agreement

Intercoder agreement was attained for all Phase I and Phase III data. Intercoder agreement was established with trained research assistants who served as secondary coders to assess the reliability of the collected data and add validity to research findings (Miles & Huberman, 1994). The following procedures demonstrate how intercoder agreement was achieved within the current study.

Observations. Training the secondary coder, a practicing early educator with over 12 years teaching experience and some graduate level course work, to use the observation guide entailed written and verbal explanation of how (a) individualizing strategies, (b) components of pedagogical documentation, and (c) open-ended questions were defined within the study. Both the observation guide and definitions can be found in Appendices O and P, respectively.

Upon completion of training, the secondary coder reviewed 25% of the observation data, the portion of data recommended by Miles and Huberman (1994) to adequately establish agreement. Sufficient intercoder agreement, as determined by dividing the total number of codes by the number of agreements, was met once 80% agreement between coders had been achieved (Miles & Huberman, 1994). The secondary coder reviewed 25% of the video recorded observations. To establish

agreement, the reviews of the primary and secondary coders were compared. Agreement was indicated when there was an exact match or less than a three second difference between the time stamp noted by the coders. Missed time stamps or tallied time stamps differing by three seconds or more were considered disagreements. Disagreements were addressed through review and discuss until the coders were able to reach agreement. The aforementioned process was repeat until at least 80% agreement was met.

Survey. A second research assistant helped establish intercoder agreement for survey data. The second research assistant, a trained undergraduate student, checked the accuracy of each coded survey. Across a total of 108 survey items, two coding discrepancies were discovered, and subsequently corrected, bringing intercoder agreement to 100%.

Interview. Interview and observation intercoder agreement was established using the same basic procedure. However, a qualitative researcher and a doctoral student were trained as secondary coders for interview data. Both secondary coders received a copy of the interview coding index (see Appendix M) and the coded statements. Although the initial review of the coded data resulted in 83% agreement, the secondary coders suggested revising the code definitions for clarity. The revised codes were developed and resubmitted to the secondary coders, along with the recoded interview data. After a second review of 25% of the interview data, 91% agreement was reached.

Field notes. Field notes were reviewed by the same qualitative researcher who helped establish the interview intercoder agreement. The qualitative researcher serving

as secondary coder studied the coding index prior to reviewing 25% the coded notes. The initial review yielded 90% agreement.

Summary

The goal of the purposeful combination and schedule for implementing these methods was to take advantage of the benefits, while minimizing the reported disadvantages linked to the use of a singular qualitative data collection method. A major benefit attributed to this configuration of qualitative methods is that it supported addressing the research objective from a variety of perspectives (Roller & Lavrakas, 2015). Observations allowed for the collection of firsthand contextual information on the individualizing practices of participating early educators and detection of changes in these practices after receiving training in pedagogical documentation. A noted disadvantage is that the act of observing may interfere with or alter the normal enactment of the observed behavior (Meriam, 2009). To address this weakness, the individualizing survey was used to collect confirmatory data on participants' use of individualizing practices and pedagogical documentation. Surveys represent a non-threatening means for collecting information from a primary data source. Further, confirmatory information was collected from participants through interviews that occurred during Phase I and Phase III of data collection. Moreover, interviews were beneficial to the acquisition of information not easily accessed by other methods of data collection. Phase III interviews served the additional purpose of obtaining each participant's perspective on pedagogical documentation after they had actively and repeatedly applied the process in their

respective classrooms. Throughout the phases one and three of the study observations and interviews field notes were taken.

Delineated throughout this chapter were the theories and methodological choices made to guide this examination of pedagogical documentation. The selected data collection methods and procedures yielded in depth information and better understanding of the impact of pedagogical documentation on the individualizing practices of early educators. Detailed in the following chapter are the products of the current research study.

CHAPTER IV

RESULTS

Analysis of study data indicated that early educators held a positive view of pedagogical documentation after learning and using the process. They credited pedagogical documentation with facilitating changes to their teaching practices and the manner in which they individualized and included children with disabilities. The early educators believed their experience with pedagogical documentation strengthened their relationships with their students, in addition to fostering behavior changes in the participating children with disabilities. Four themes helped formulate answers to the research questions, specifically (a) learning pedagogical documentation, (b) changes in teaching and learning behaviors, (c) relationship building, and (d) customization of inclusion and individualization. In the subsequent sections these themes are used to present evidence defining participants' reported experiences and perspectives. Prior to addressing the themes, a detailed description of each participant's (a) teaching philosophy and practice, (b) students, and (c) teaching environment is provided. These descriptions are offered to better contextualize and fully illuminate changes to the thinking and practices of participating early educators.

Description of Participating Early Educators

Cornelia

Cornelia, a 55-year-old African American female, was lead teacher in Classroom A of the Forsyth County site. Cornelia has been a teacher for 28 years, with 10 of those years in her present position as a pre-k lead teacher. She holds a Bachelor's Degree in Special Education and a K-12 Special Education teaching license (see Table 6).

Table 6

Participant Demographics

Participant	Race	Age	Degree	NC Teaching license	Time in current position	Years in education
Cornelia	African American	55 years	BS in Special Education	Yes	10 years	28 years
Naomi	Caucasian	29 years	BS in Human Development	Yes	1.5 years	7 years
Cecelia	African American	28 years	BS in Child Development	Yes	5 years	5 years
Julie	African American	45 years	BS in Psychology	No	10 months	24 years

Cornelia completed several Master's level courses in early education and states that an educator must always seek out new knowledge in order to meet the needs of his or her students. She believed that through her participation in research studies and ongoing professional development activities she was becoming a "master teacher." She credited her ability to make her classroom a fun and nurturing environment for the children to her

openness to trying new classroom practices, in addition to continual examination of teaching literature and of her teaching practices.

Cornelia's teaching philosophy situated the educator as both a repository of knowledge and facilitator of learning. She believed the role of the teacher was to present children with knowledge and then facilitate the individual child's further exploration of that knowledge. She states,

> so I expose them to the information, we do a session where we ask questions or we talk about and discuss and find out what else do they want to know about this particular thing and then I supply them with the information, or the, I give them the resources and they you know, go get it from there.

Establishing a respectful relationship with the child, as characterized by valuing his or her opinion and needs as an individual was also central to Cornelia's philosophy and individualizing practices. She further operationalizes her philosophy by basing a majority of the lesson plans for the spring semester on the expressed interest of the children. She says that "from August to December I run the ship," and then uses information from her survey of and interactions with the children in December to construct interest based lessons for the remainder of the school year.

Cornelia's students. Cornelia's classroom operated ten months per year with a current enrollment of 18 four- to five-year old students. There were nine girls and nine boys enrolled in her inclusive and racially balanced (i.e., Caucasian, African American, and Hispanic) classroom. Two students, one Caucasian and one African American male, received special education services for autism and speech delays respectively. Cornelia selected the student with autism to participate in the current study. Table 7 contains

demographic information on the aforementioned child, and other children with

disabilities who participated in the study.

Table 7

Child Participant Demographics

Child Participant	Teacher	Race	Age	Sex	Disability
Child A	Cornelia	African American	55 months	M	Autism
Child B	Naomi	Caucasian	60 months	M	Speech delays
Child C	Cecelia	African American	50 months	F	Speech delay
Child D	Julie	African American	59 months	M	Autism

Naomi

Naomi, a 29-year-old Caucasian female, was lead teacher of Classroom B, the

second combination Head Start/Smart Start within the Forsyth County site. In addition to

earning a Bachelor's Degree in Human development with a concentration in children and

adolescents, she minored in psychology. Naomi possessed a North Carolina K-6 teaching

license and was working towards a Master's degree. She has held her current position as

lead teacher for one and a half of her seven years in the field of education.

Naomi's approach to teaching entailed incorporating children's interests into all

aspects of the learning environment and by offering multiple and varied opportunities to

investigate these interests. She believed that children learn best when they are positioned

as leaders in their education and are allowed to learn through play. Naomi viewed the

teacher as a facilitator of learning, not "the dictator up there, not drilling, drilling them on

the abc's and everything." In regards to individualizing, she relied on suggestions from therapists and applying the interest of the child to adjusting the learning environment.

Naomi's students. Classroom B served as a combination classroom ten months per year, and a summer camp program the remainder of the time. Naomi's class was an ethnically diverse group of nine boys and nine girls. Of the 19 students, ten were African America, five were Caucasian, and four were Hispanic. Two of Naomi's male students had a diagnosed speech or language delay. Naomi stated in her Phase I interview that the Caucasian male four-year-old student with special needs who participated in the study was undergoing an evaluation for autism. However, the student did not receive a diagnosis of autism during the course of this study.

Cecelia

Cecelia was a 28-year-old African American female. She held a Bachelor's Degree in Child Development. Cecelia earned a Birth to Kindergarten teaching license and is presently pursuing a Master's degree in early education online. She has been an early educator and in her present position for five years.

Cecelia placed her goal of developing a close relationship and understanding of the child as an individual learner at the core of her teaching philosophy and individualizing practices. She asserts that coupling her knowledge of the child with understanding the child's interest facilitated educating all children. She stated that "Once you have your kids for a certain time, you know what works for what child," and this in turn helps you select the best methods for educating the child. In her current classroom,

which includes several children with disabilities, she stated that support and suggestions from therapist helped her to achieve her teaching goals for children with disabilities.

Cecelia believed that a good teacher has to be a good listener, however she admits needing to improve her skills in this area. She revealed that she "loves to get to know them on a personal level as to know why they say certain things, why they believe certain things work, or why it doesn't work." Cecelia also believes that in order for learning to be meaningful it must be (a) individualized, (b) interactive, (c) fun, and (d) give the child "some form of responsibility for their own learning."

Cecelia's students. There was one teaching assistant consistently assigned to help Cecelia education the 17 majority minority preschool age children. The class was composed of (a) eight African American, (b) two African, (c) one Caucasian, and (d) six Hispanic children. Of the 17 children currently enrolled in Cecelia's pre-k class, four have been diagnosed with a disability. All four children, three boys and one girl receive therapy to address their speech and language needs. Cecelia selected the four-year-old girl with a speech delay as the target child during the study.

Julie

Julie was a 45-year-old African American female and has earned a Bachelor's degree in Psychology. She has been an early education professional for 24 years, holding positions as both a classroom teacher and the director of a home-based childcare program. She has held her current position as pre-K teacher for 10 months. Julie valued hands on, active learning and believed that repetition is needed for children to grasp and retain knowledge. She also shared that infusing lessons with topics that interest children

facilitate learning. This ideal, in addition to getting to know the child on a personal level

defined her approach to individualization. Thus, one of Julie's goals as an educator was

understand the learning style and preferences of her students. She revealed,

> Because you know every child has a different learning style, you know some are visual, some you can, you know have to be hands-on, you know. For some hearing works just as well, and you know some need hearing and visual. You know, some are hands-on and some can just hear it and they know it and some have a visual thing, you know to where they can see it where they really understand it and comprehend, you know what you're talking about. And people, that's really just the way that you learn the child to see the best way they learn.

Julie's students. Julie worked with an assistant teacher and her class consists of

two African American and 13 Caucasian children. There were nine males and six female

children in Julie's half day classroom. Two of her male students had been diagnosed

with a disability, one with a speech delay and the other with autism. The student

diagnosed with autism, an African American male, received special education services

once a week from an itinerate teacher served as Julie's primary child participant in the

study.

In addition to comparable educational backgrounds, the early educators shared

similarities in their (a) instructional practices, (b) planning behaviors, (c) recent

professional development experiences, and (d) competence in learning and implementing

pedagogical documentation. A narrative description of each participant in regard to these

aspects is provided in the results section.

Learning Pedagogical Documentation

Participants shared that the presentation of information on pedagogical

documentation supported their learning needs and that the self-paced completion of the

modules were factors that contributed to their positive experiences toward learning

pedagogical documentation. Other factors, such as the assessment activities and multiple

means of accessing relevant information, also improved participants' learning experience.

Further, participants reported that in spite of minor technical difficulties, they were able

to understand and competently implement pedagogical documentation. Evidence from

Phase II assessments, described next, lend support to participants stated beliefs regarding

their success in learning and implementing pedagogical documentation. After these

descriptions, similarities and differences in participant perspectives are provided.

Results from Phase II Assessments

The participants were similar in the level of competence they demonstrated in

learning and implementing pedagogical documentation. The average score for each

participant on all quizzes completed during Phase II was 95%. Julie was the only

participant to score less than 90% on her first attempt to complete the first quiz in Module

I. This was due to technical problems associated with using a tablet to access the module,

causing her to miss some information relevant to successfully completing the quiz. Her

second attempt, completed using a laptop computer, resulted in a score of 100%.

Comparable results were realized on all other module assessment activities, such as

production of the documentation artifact. All of the participants met criteria on each step

of pedagogical documentation by or during their third cycle implementing the process

(see Table 8).

Table 8

Phase II Pedagogical Documentation Assessment Results

	Cycle One			Cycle Two			Cycle Three		
Participant	S1	S2	S3	S1	S2	S3	S1	S2	S3
Cornelia	X		X	X	X	X	X	X	X
Naomi		X	X	X	X	X	X	X	X
Cecelia		X		X	X	X	X	X	X
Julie	X		X	X		X	X	X	X

Note. S1= Step 1; S2= Step 2; S3 = Step 3. X indicates fidelity was met.

Learning Content

As related to the presentation of information, the inclusion of multiple written and visual examples appealed to each participants' self-reported learning style. Statements in favor of the use and types of examples include:

> I think with having examples that kind of like gives you a starting point to know where to go instead of just reading, because ah I know it seems like a lot with the early childhood, they are like here is the best practice and here is this and this, but then it doesn't go into examples (laughs), so it makes it a little bit harder to ah to be confident that you are implementing it correctly.

Moreover,

> . . . and it was relevant and good and it was helpful and all that you know discussing about, you know how other teachers had done it, it showed little examples of what you know was being done. It was helpful.

Naomi indicated that both the written and visual examples increased her confidence in her ability to correctly implement pedagogical documentation. Cecelia shared that, although having multiple other commitments, the freedom to self-pace learning within the modules prevented her from feeling overwhelmed and thus facilitated her completing the study. In addition, participants identified the assessment activities as helpful components of the modules because these activities made the modules more interactive.

Participants identified the readings as a positive aspect of using the modules to learn pedagogical documentation. According to participants, in spite of the length of readings included in the modules, the readings were informative and improved their understanding of the process. Naomi tempered her statement of "It was a lot of reading" with "But I liked the information that was conveyed in the textbook and everything. I thought it was really useful." Even though they felt the readings were relevant and easy to understand," Julie suggested distributing the readings evenly throughout Module I and Module II to make the overall learning experience more "user friendly."

In contrast, one factor that detracted from participants' learning experience was the vague instructions within Module I. The following statement, provided by Cornelia aptly summarizes a sentiment shared by each of the participants

> I was like, so that kind of, I probably could have gotten a whole lot more if, in the beginning, when it's clarified and very specific that I needed to, that when you are observing to, when you are looking, it's all about documentation, you know, to where its better, not just to observe but to document what you are hearing.

Another detractor from the learning experience reported by participants was technical

issues regarding accessing information within the modules as described below.

Technical Issues

The most frequently mentioned technical concern was complications in

navigating back from links embedded within the slides. For each participant this problem

was frustrating and resulted in wasted time. They suggested that their learning

experience would have been better had the module been formatted to allow bookmarking.

The issue was more pronounced for Julie, given that she used an electronic tablet to

complete the modules. She stated,

> Me getting back to the section I was at was difficult when I clicked with the
> tablet, it may not have been the same with thing if you have a computer or
> whatever, but with the tablet it was harder for me to get back to my same point
> where I was reading it before I clicked the link.

Julie reported that her use of an electronic tablet to complete the modules created

additional navigation difficulties, such as limited or no access to the embedded videos

and Power Point presentations. The poor audio quality of two Module One videos also

diminished participant engagement with the modules. However, they all stated that

providing hardcopy versions of each reading and transcripts of videos contained within

the modules adequately addressed these issues.

Changes to Teaching and Learning Behaviors

Early educators reported that, as a result of learning and implementing

pedagogical documentation, they altered some of their core teaching practices to make

components of the pedagogical documentation substantive elements in their teaching

practices. In addition, they noted changes in the learning behaviors of participating children with disabilities. First, results addressing changes to participant's use of individualizing strategies and pedagogical documentation, constructs specifically targeted by this study, are disseminated. Second, results reported by each participant regarding changes to other aspects of their teaching practices and the impact of the process on their students with disabilities are shared.

Phase I Teaching Practices of Participating Early Educators

Results indicated minor changes to the frequency and type of individualizing strategies used by participants after they learned and implemented pedagogical documentation. The following results, specifically triangulation data from Phase I observations, surveys completed by the participants, and interviews during Phase one, further illustrate these changes.

Use of individualization and pedagogical documentation. The following results were derived from Phase I observations and interviews. Each early educator implemented the targeted individualizing practices six times or less during Phase I observations of small and large group activities. Naomi individualized most frequently, a total six times during Phase I, followed by Cornelia and Julie, both of who implemented individualizing strategies three times each. Cecelia's observed use of these strategies, specifically ELOs and human support, occurred only twice within Phase I.

Of the 14 total occurrences of individualization across the sample, five were categorized as interactional and nine environmental. Naomi implemented the greatest variety of individualizing strategies; environmental supports, child preference, human

support, and ELOs. Cornelia's individualizing strategies entailed use of child preference, environmental, and human support. Julie employed one strategy, use of special equipment, to individualize during Phase I. Across the sample, individualization occurred in ten of twenty-four small and large group activities observed within Phase I. Participating early educators almost exclusively individualized during small group activities, with the exception of Cecelia and Julie. Although Cecelia individualized once during a large group activity, all of Julie's individualizing occurred during large group activities. Table 9 contains an analysis of the individualizing strategies employed by each participant during the observations.

Table 9

Phase I and Phase III Individualizing Practices

Participant	Type of activity	Phase I		Phase III	
		Individualizing category	Individualizing strategy	Individualizing category	Individualizing strategy
Cornelia	Small group 1	N.O.	N.O.	Environmental	Environmental support
	Small group 2	Environmental Interactional	Environmental support Human support	Environmental	Environmental support
	Small group 3	Environmental	Environmental support	Environmental	Environmental support
Naomi	Small group 1	Environmental	Environmental support Preference	Environmental Interactional	Environmental support Preference ELO
	Small group 2	Environmental Interactional	Simplification Human support	Environmental Interactional	Environmental support Preference ELO
	Small group 3	Interactional	Human support ELO	N.O.	N.O.

Table 9

Cont.

Participant	Type of activity	Phase I		Phase III	
		Individualizing category	Individualizing strategy	Individualizing category	Individualizing strategy
Cecelia	Small group 1	N.O.	N.O.	Environmental	Environmental support
	Small group 2	Interactional	Human support	Environmental	Environmental support
	Small group 3	N.O.	N.O.	Environmental	Environmental support
	Large group 1	Interactional	ELO	N.O.	N.O.
Julie	Small group 2	N.O.	N.O.	Environmental	Environmental support
	Large group 1	Environmental	Special equipment	N.O.	N.O.
	Large group 2	Environmental	Special equipment	N.O.	N.O.
	Large group 3	Environmental	Special equipment	N.O.	N.O.

Note. N.O. = None observed

Phase I interviews with two participants (Naomi and Cecelia) revealed instances of individualization, such as embedded learning opportunities and use of child preference, that were not detected during observations. Given that both practices are designed to be embedded within a routine or activity, neither was evident during observations. Afterwards, the researcher reviewed the designated video recorded observations and confirmed the participants' self-reported use of these strategies.

In regards to participants' Phase I use of pedagogical documentation, all participants reported using open-ended questions, photography, and familiarity with visible listening. The number of open-ended questions participants' asked across Phase I

small and large group observations ranged from Naomi's high of 75 to Cornelia's low of 11. Julie and Cecelia totaled 26 and 27 open-ended questions, respectively. These frequencies amounted to a per activity average use of open-ended questions of (a) 13 for Naomi, (b) five for Cecelia, (c) four for Julie, and (d) two for Cornelia. However, frequency counts of Phase I observations indicated none of the participants photographed the children or evidence of the children's progress during large or small group activities. Moreover, Naomi was the only participant to engage in visible listening within the first phase.

Comparing Phase I individualization and pedagogical documentation data. Interview and survey data supported observation data collected on participants' instructional practices and use of individualizing strategies, but did not completely support their observed use of components of pedagogical documentation. For example, the participants' reported use of human and environmental supports was substantiated by survey and observation data. Additionally, each participant described pairing the child with disabilities with peers who had already mastered the child's target skill during small group activities or free play. Naomi stated:

> I usually match them with somebody, because he did come in with a behavior IEP as well, ah, socialization. So I continued to use that support when pulling him into groups that I know he can speak out in because I know that was one of the issues and that he can have experience in saying "it's my turn" and where he can experience the strength and confidence in that, so I will pull that and then every once in a while I will pull somebody who might be more of a struggle for him to talk to so we can work on it.

Further, Cornelia shared,

> If oh, a particular child is strong in one area I get one of them to work with one who may be having a little difficulty. See we do that on the computer as well. We match two children on the computer, one who is really on top of it and one who may need some help, one who may be really struggling with it. That works really well and the kids really like to be the teacher you know, guide them through or explain how to do an activity. But its only if they are really good at it, they get to go and help somebody. So we do a lot of partnership and ah when we do activities I always try to, depending on what the activity is I always try to pair a stronger one with one who may be struggling a little or has a special need. So that they are using the, as kind of a model.

Additionally, there were also discrepancies between interview, survey and observation data on use of (a) three specific individualizing strategies, (b) open-ended questions, and (c) photography. Although each participant stated they used modeling and prompting frequently, there were no instances of the former or the latter strategies recorded during Phase I observations. Moreover, Cornelia reported implementing time delay daily, however, no evidence of its use was captured during observations. Further, two participants reported use of open-ended questions differed significantly from their observed usage. Although Naomi estimated an average use of four to seven open-ended questions per activity, her average use was 13 questions. Instead, during Phase I Cornelia's self-reported use of four to seven open-ended questions appeared to be an overestimation of her actual average of two per activity.

Phase III Individualizing Practices and Pedagogical Documentation

There was no significant change to participant Phase III use of individualizing strategies. While Cornelia and Naomi's level of use remained at three and six occurrences respectively, Cecelia's use of individualizing strategies increased from two

to three, just one more than in Phase I. In comparison with the three instances captured during Phase I, Julie was observed individualizing once during Phase III. Unlike Phase I, all the individualizing strategies observed within this phase were implemented within small group activities and most, ten of 12, were categorized as environmental (e.g., environmental supports and child preference). Further, only nine of the 24 activities observed during Phase III included use of individualizing strategies.

From Phase I to Phase III, three participants increased use of the open-ended questions and visible listening components of pedagogical documentation. The frequency count conducted on Cecelia's Phase III observations showed an increase from 27 open-ended questions in Phase I to 161 in Phase III. Cornelia increased use to 41, and Julie showed a small increase to 29 open-ended questions during Phase III observations. In contrast, Naomi was the only participant to decrease use of open-ended questions. Frequency counts also showed modest increases in participant use of visible listening. Although, each participating early educator was observed using visible listening at least once, Cecelia demonstrated the largest increase in visible listening. She used visible listening from one to six times within each of the Phase III small and large group activities. Unlike the other three participants, during Phase III Cecelia also began to incorporate use of photographs of the children into small group activities. The details of participant use of these components are presented in Table 10.

Table 10

Phase I and Phase III Use of Pedagogical Documentation

Participant	Type of Activity	Length of activity		Open-ended questions		Visible listening		Use of photographs	
		P1	P3	P1	P3	P1	P3	P1	P3
Cornelia	Small group 1	26:04	26:59	0	30	0	4	0	0
	Small group 2	20:47	14:37	0	1	0	0	0	0
	Small group 3	20:00	22:03	0	0	0	0	0	0
	Large group 1	30:23	17:15	10	4	0	1	0	0
	Large group 2	17:25	17:16	0	1	0	1	0	0
	Large group 3	12:41	13:20	1	5	0	0	0	0
Naomi	Small group 1	18:33	9:55	6	5	0	0	0	0
	Small group 2	8:10	6:18	3	14	0	4	0	0
	Small group 3	13:18	10:53	13	9	0	0	0	0
	Large group 1	17:54	18:18	30	9	2	2	0	0
	Large group 2	22:56	24:59	9	18	0	2	0	0
	Large group 3	12:42	15:18	14	15	0	0	0	0
Cecelia	Small group 1	9:05	11:34	1	23	0	1	0	0
	Small group 2	14:56	16:49	2	32	0	3	0	1
	Small group 3	7:47	9:14	1	32	0	1	0	0
	Large group 1	12:34	18:43	14	26	0	5	0	0
	Large group 2	8:26	12:06	4	26	0	6	0	0
	Large group 3	10:13	12:00	5	22	0	6	0	0
Julie	Small group 1	10:27	10:06	0	5	0	0	0	0
	Small group 2	12:21	16:38	0	4	0	0	0	0
	Small group 3	28:28	18:51	4	5	0	0	0	0
	Large group 1	28:35	14:27	8	9	0	0	0	0
	Large group 2	20:00	12:46	1	2	0	1	0	0
	Large group 3	12:00	18:07	13	4	0	0	0	0

Changes to Other Teaching Practices

The appropriateness of the process for supporting and refining participating early educators' existing teaching practices influenced their favorable impression of pedagogical documentation. Each participant expressed satisfaction with the process and stated an interest in incorporating the process, in whole or in part, into their teaching practices. They felt that "It wasn't a bad process at the end of the day," and "It was a great process. I feel it should be used." Although they felt pedagogical documentation, in its entirety, was too time consuming to fully implement on a regular basis, they described it as an enjoyable process for the teacher and the children. The next section demarcates aspects of pedagogical documentation participants accredited with enhancing their practices, thus influencing their ability to meet the individual needs of all their students.

Cornelia maintained that the process helped her refine her teaching practices. Specifically, she stated that (a) observation facilitated the interest based planning she employs during the second half of the school year, (b) individual interpretation helped her identify bias in her assessment of students, and (c) collaborative interpretation provided a means for monitoring the progress of a student with special needs. Cornelia extolled her appreciation of and intention to implement pedagogical documentation at the start of the next school year. She also reported an unexpected benefit of using the process. By sharing video recordings of her collaborative interpretation sessions with the family of a student with disabilities, she was able to advocate on behalf of the child. Cornelia shared,

> One of his problems is staying focused and that particular day we did the last session, when we did the last one it simply showed that the medicine was not working. Or at least that dosage is not working, it had done absolutely nothing for him, and him change in medicines or getting another dose of medicine was based on someone else's opinion who is not really a professional or and who spent very little time with him and me being, my partner discussed it and we didn't think that it was necessary. But I didn't have to say anything because the video showed that as, that the extra dose was doing absolutely nothing but given more medication.

She also conveyed that the process enabled her to evaluate her instructional practices.

Cornelia gave this example:

> so just you know for example, if I did not give someone enough wait time the video triggered it to remind me they need a little more wait time. Because sometimes you know we get a little caught up in the moment, with trying to move for time and whatever, but I still have to remember that these kids need enough time to process. You know, so it just, it reminded me of things that I should continue to do.

Interestingly, Cornelia declared that despite the usefulness of the video produced during collaborative interpretation, its time-consuming nature lessened the likelihood of its continued use in her classroom. Naomi intended to keep implementing collaborative interpretation because it aligned with her teaching philosophy and complimented her style of questioning. She reported,

> I think it enhanced and helped to build on what I had already believed, as far as play-based learning and everything like that I think it helped to enhance that and gave me tools to help better implement that.

She felt this component of pedagogical documentation, specifically (a) using photographs of the children, (b) having them draw their thoughts on paper, and (c) using open-ended

questions to guide conversations with them, provided additional opportunities to reveal their knowledge and interests. However, for reasons identical to Cornelia's, she doesn't intend to continue video recording the process.

Unlike Naomi and Cornelia, Cecelia intends to fully adopt the collaborative interpretation component of pedagogical documentation. Revelations gained from implementing this step with her students compelled her to say, "It taught me some new things and made me open my eyes and start taking notes and realizing that all my children have a voice, even my children with IEPs." Like Naomi, the manner by which the process in general and collaborative interpretation, in particular, supported her teaching philosophy supported her regard for pedagogical documentation. She believed her small group activities became more interactive and meaningful after she increased her use of each feature of collaborative interpretation. Her claim was supported by researcher's Phase III observations and field notes, which indicated more use of open-ended questions, photographs, and child drawings during small group activities.

Julie, in contrast, identified the observation component of pedagogical documentation as the practice she intends to fully adopt. Further, by engaging in pedagogical documentation observations she feels she has improved her capacity to derive more meaningful information from observations, a major component of her lesson planning practices. Although she found use of the whole pedagogical documentation process unsustainable, she felt pedagogical documentation observation practices integrated well with and improved her current observation practices. She offered this statement:

I think I learned more or connected more with the child, not necessarily at the sit down part looking at the pictures, but actually watching them and observing them in the center and then them coming up and talking to me you know at the center, you know finding out what they're interested in, being curious about and what they're learning about and what they are wanting to know. It was easier to connect their then at the table when I was showing them the picture and trying to get them to talk.

Julie believes the changes to how she engaged with the children during observations lead to more insight on the children's interests and strengths. Prior to implementing pedagogical documentation, she described her behavior during observations as either completely detached or enmeshed in the children's play. However, through interacting with the children during observations as prescribed in pedagogical documentation she gathered information more conducive to developing observation and interest based lessons. She states,

You catch a lot more when you observing them in their play versus when you are playing with them, because you catch so much more stuff, you know what they are saying, and how they are saying it, you know, what they are thinking, you know is a lot better when you are observing, I did like that.

Changes in Children's Learning Behavior

According to participating early educators, use of pedagogical documentation instigated changes in the learning behaviors of their students with disabilities. These early educators reported a perceived change in their students' eagerness to participate during lessons and in their verbal engagement with peers and adults during activities. The participants remarked that in spite of the challenges, specifically the time required for implementation, the process was beneficial to increasing students' participation.

They believed the children felt valued when the early educator not only questioned, but also video recorded or wrote down their responses, thus increasing the children's eagerness to join in and contribute during classroom activities.

Cecelia and Naomi observed their children with disabilities starting more verbal interactions during planned small group and child directed free play activities. Cecelia offered that by the end of the study her student was taking the initiative to begin conversations throughout the day, and specifically during small group activities, she stated,

> Now when I first started out, my children with the IEP were more silent, more shy than my other children, but hearing them with the other children that do talk a lot, by the time I finished this documentation process, they were telling me about what's on your paper, they were telling me what they wanted to do, who they want to share it with me.

Although Cecelia observed these changes in all four of her children with disabilities in her classroom, the verbal and interaction changes to the child she focused on for the study were even more notable. She credits the questioning and note taking that occurs during collaborative interpretation with (a) providing more opportunities for the child to speak, (b) increasing the child's confidence in her verbal skills, and (c) improving the child's self-esteem. Cecelia commented,

> So I kind of feel like it helped because she feels like okay, Ms. Cecelia is giving me a lot more attention so I can do my do my part, I can go to the table. So I kind of do feel like it helped me in the means of that. Just giving her that extra confidence . . .

Naomi held a similar impression of the impact of pedagogical documentation on her student's confidence. She believes that in the past, due to the student's speech impairment his peers did not attempt to answer or sustain his infrequent attempts at conversation. However, after several implementations of collaborative interpretation revealed a common interest of the target student and his peers, the target child began to initiate conversations with his peers based on these shared interests. Further, she observed that his peers responded to and maintained these conversations longer and thus increased his willingness to engage more frequently. Although she believed that the children's familiarity with the characters and settings that define their shared interest made it easier for them to decipher the target child's speech, Naomi believed the positive response from his peers encourages the child to interact. Naomi added that the target student also increased attempts to initiate conversations with her. She revealed during her Phase III interview:

> But it also helped, it helped with him wanting to, to converse more. Because he would start talking about it, he would come in and ask me if I had seen, apparently, a new edition to it or something, so he would ask if I had seen that so I think it helped that way.

Further, Naomi shared that when she based small or large group lessons on the interests she discovered through pedagogical documentation, her target child engaged longer and contributed more to those activities.

Relationship Building

Participants attributed the intentional questioning, listening, and one-on-one interactions that occurred during collaborative interpretation with fortifying their existing

positive relationships with their students. One remarked, "It makes you closer because you have a one-on-one conversation with them and then they are more open to talk to you about it," while another stated, "I think it brings you closer. Any time you do small group and they feel like it is special to be at the table, I kind of feel like that builds upon the relationship." The early educators reported that getting to know the child on a more personal level was inevitable due to the increased time spent listening as you record the child's responses to open-ended questions. As one participant contributed, "You have to write so you are actually listening more and yet, you have no choice but to get to know them on a personal level because they go to talking about all sorts of things." The importance of these stronger relationships, as perceived by the participants, was best captured in the following statement by Naomi:

> With me, relationship building was the key thing in that, I think when you have positive relationships with your students it makes it a lot easier to work with them and they seem to listen better. There are still challenges of course but I think that the process helps to build good relationships with them.

Regarding their students with disabilities, early educators reported that collaborative interpretation lead them to gain more respect for the child as a learner and to being more accepting of the child as a valued contributor to his or her learning. Cecelia shared,

> I learned to listen and allow them to have their own opinion, their own say. But I just have to let my children have fun and give their opinion, so I kind of let them be responsible for their own way of learning.

In comparison, Julie became more connected to her student with disabilities during pedagogical documentation observations. She offered two reasons these

observations had a positive impact on her relationship with the student. Primarily, she

felt that strictly watching, but not engaging in the student's play during observations, lead

to more insight on the child's character and preferences. She remarked,

> So, but it is easier when you are observing them versus just playing with them. You catch a lot more when you observing them in their play versus when you are playing with them. Because you are, you're missing, because you are not writing so you will miss a lot of conversation going on, but you are missing part of it, things that you could be recording ah because you are not, ah, because you are playing.

Second, the student began to ask her questions during the observations, something he had

not done prior to her participation in the study. She believed he did this in imitation of

her asking him questions, as suggested when implementing pedagogical documentation

observations. She shared,

> It was a better connection that way. You know when I'm watching them and they are coming up to me and asking me questions and you know, that it was a more, a better connection, right and what they were doing and how they were, you know playing at, asking, you know.

Customization of Inclusion and Individualization

Early educators applied insight gained from pedagogical documentation to

support inclusion (i.e., participation) and customized individualization of classroom

activities for their student with disabilities. Whereas participation addressed social

engagement and interactions within the classroom, customization of individualization

encompassed incorporating the child's identified interests and preferences into learning

activities. Participation was supported by participants changing schedules, materials, and

grouping of students based on their analysis of information obtained while implementing pedagogical documentation. Specifically, during collaborative interpretation they observed changes in the (a) frequency of participation, (b) verbal interactions, and (c) focus of the child with disabilities. Thus, each made changes designed to prompt the same behaviors from the child across activities. Three of four participants reported that customizing individualization through building upon the child's specific interests led to the child's more enthusiastic and prolonged engagement in non-preferred learning activities. Insight gained during pedagogical documentation observations also provided information used to impact inclusion and to personalize individualization.

Naomi and Cecelia facilitated participation through changes in scheduling and grouping. Naomi began conducting her collaborative interpretation small group activities, in which she learned more details on the child's interests, prior to circle time. She made this change after noting that her student with disabilities' increased verbal contributions and interactions with peers during circle time conversations that built upon these interests. In addition, as a result of pedagogical documentation, she believes she was better able to identify opportunities to facilitate interaction between the child with disabilities and his peers. During collaborative interpretation conversations, she learned that the child was more willing to interact with peers in activities that held less intrinsic meaning to the child. Naomi shared that her past attempts to increase the child's interaction with peers, a primary IEP goal, entailed insisting that the child share toys and talk to peers during most free play or small group activities. However, implementing pedagogical documentation helped her to, "like step back and to look at it more

intentionally." She stated that instead of saying to the child "just let them play with you,"

she engaged the child through questioning and conversation to understand the meaning of

the activity to the child, and then determined how best to facilitate interaction. Cecelia

increased the number of small group activities, as well as decreased the number of

children within each small group activity to facilitate the participation of her student with

disabilities. She stated,

> So I think it helped them, as far as my putting more small groups together, and
> allowing them to be a part of a smaller situation and I began to notice they talk a
> lot more than they would in the large group carpet.

She further attributed reducing the number children in small group activities with

increasing her interaction with the child with disabilities during these activities, thus

giving the child more confidence to participate. Cornelia improved inclusion by

increasing use of video recording during small group activities. She stated that because

her student talked more when she video-recorded collaborative interpretation, she began

video recording more small group activities.

In contrast, Julie used information obtained during observations to facilitate her

student with disabilities' participation in and individualization of small group activities.

She described the observation that lead to her setting up learning opportunities and

conducting activities in the child's preferred learning centers to encourage him to

verbally interact more with his peers:

> I don't know what it was with that day but he stayed the longest, where you could
> really, that is the first time I really heard him be vocal at the science table. And
> then that time frame when he was at the train table, the reason why I was

> recording him at the train table, because outside the science area that's the most I have heard him talk or ask about things, or "what is this" or "what are we doing with this" you know, so and ah with that you know it gives me ideas for plans on what we need to do try to incorporate his talking, you know, ah playing those certain areas. Trying to create different items that you can do in those particular areas that you know, you can help to bring out his talk.

Additional evidence of Julie's changes to support participation and individualization was recorded during a Phase III observation and field notes. Julie moved a small group art activity to the science/manipulatives area, one of the child's preferred areas, after repeated unsuccessful attempts to entice the child to join her at the art table. She began asking the child questions, and then engaged him in completing the planned activity.

Summary

Early educators attributed knowledge gained as a result of pedagogical documentation with facilitating inclusion and strengthening their relationships with their students with disabilities. After learning and using the process early educators adjusted their individualizing practices to include more environmental supports, specifically altering the temporal and social environment in order to promote the child's participation and engagement in classroom activities (Horn & Banerjee, 2009). Further, the participants found that pedagogical documentation complemented or enhanced use of the existing practices (i.e., observation, questioning) they employed to assess and instruct their students. Although they considered it a time consuming process, each participant suggested that she would continue to use, at the least, parts of pedagogical documentation to support their future individualizing efforts.

Conclusion

The results discussed throughout this chapter helped address each research questions, and thus provided insight on the impact of pedagogical documentation on the individualizing practices of early educators working in inclusive environments. Early educators interpreted learning and implementing the process as a meaningful experience where they gained greater understanding of the interests of their students with disabilities. This knowledge allowed them to create for the child more inclusive learning experiences. Further, the knowledge they gained of the child with disabilities guided changes in their interactions with and perceptions of the child. Discussion of the preceding results as related to the theoretical framework presented in Chapter II and the alignment with existing research follows.

CHAPTER V

DISCUSSION

The purpose of this qualitative inquiry was to explore the impact of pedagogical documentation on the individualizing practices of early educators working in inclusive preschool environments. Empirical evidence from international studies extolling the utility of this process warranted similar exploration within the context of early childhood special education in the U.S. Specifically sought was a greater understanding of early educators' experiences of learning and implementing the process, as well as how they applied the products of pedagogical documentation to meeting the needs of young children with disabilities. Contextualized within social constructivism (Vygotsky, 1978), this study was further shaped by observational learning theory (Bandura, 1986) to illustrate how each step within pedagogical documentation might have supported changes to early educator's individualizing practices. Therefore, in the current inquiry, these theories were combined with observations, interviews, and a survey in order to address the research questions and add to the literature the participants' perspectives on the effectiveness of pedagogical documentation.

According to the findings of this study, pedagogical documentation had a positive impact on the individualizing practices of participating early educators. Results indicated that participants increased their ability to access information essential to supporting their primary individualizing strategy—use of child interests and preference. They felt that

learning the process was enhanced through their access to the training modules and that using this process strengthened their relationship with their student with disabilities. Further, implementing the pedagogical documentation process fostered reflection and adjustment to their teaching practices. Benefits to the child attributed to participants' use of pedagogical documentation entailed increased confidence to interact with peers and adults, in addition to greater participation of the child with disabilities in classroom activities. After connecting the results to the theoretical framework, the aforementioned points, as well as points of convergence and divergence between the results and existing literature are addressed in following sections.

Situating Pedagogical Documentation with Social Cognitive Theory

This discussion of the study results is situated within the reciprocal determinism and observational learning aspects of social cognitive theory (Bandura, 1986). In relation to reciprocal determinism, learning and implementing pedagogical documentation did, in fact, precipitate changes in and influence the three components addressed within this theory: the individual, behavior, and the environment. As Bandura posits, changes in one of these components precipitates changes in the other components within the system. Accordingly, new inputs to the early educator (individual), such as learning and implementing pedagogical documentation (new behavior) resulted in changes to the early educators' individualizing practices (behavior), and to their inclusive classroom (environment).

Changes in Individuals

Based on the study findings, there was an affective change in the participants, as they reported using pedagogical documentation strengthened their relationship with the child with disabilities and increased their respect for the child as a learner. Participants offered that through pedagogical documentation they became more aware of nuances in the child's personality, a benefit of the process also touted within literature supporting the Reggio approach. Their enhanced understanding of the child as an individual and broadened perspective of the child as a meaningful contributor to his or her learning lead to changes in the strategies they used to individualize for the child. These findings converge with and extend literature on pedagogical documentation. Although akin to other studies in reporting similar changes to early educator teaching practices (Buldu, 2010; Fyfe, 2012; Giudici, Rinaldi, & Krechevsky, 2001; New, 1998; Rinaldi, 2006), the current findings on changes to the teacher-child relationship represents new knowledge. With addition research, developing the teacher-child relationship maybe be found a vital aspect to supporting individualization, and thus better outcomes for children with disabilities.

Changes in Behaviors

In direct alignment with Katz and Galbraith (2006), participants' changes in behavior (i.e., individualizing practices) due to pedagogical documentation entailed the intentional use of the child's preferences and interests to address IEP goals. While prior to the study each participant had engaged in some interest-based planning, they had not purposefully applied the child's interest or preferences to addressing his or her IEP goals

as participants had done in Katz and Galbraith. In both studies, individualizing practices

enhanced by pedagogical documentation were used, and found helpful to address the

social or language related needs of the child. However, more examination of the impact

of pedagogical documentation on individualizing is needed to understand whether similar

results could be realized when attempting to address IEP goals within other

developmental domains.

Changes in Environment

While results did not indicate any significant changes to the structural

environment due to pedagogical documentation, changes in participant individualizing

practices extended to manipulating the learning environment to better meet the needs of

the student with disabilities. No evidence was collected by observations, interview, or

field notes of participants altering the (a) arrangement of furniture, (b) décor, (c)

equipment, or (d) physical structure of the classroom based on learning or implementing

pedagogical documentation. However, participants did use information gained from

pedagogical documentation to rearrange their daily schedule, alter the number of children

participating in small group activities, or relocate activities to different areas of the

classroom to encourage the child with disabilities to participate.

These findings contribute to the field of early childhood regular and special

education by illustrating one method to enhance educator use of environmental

individualizing strategies. Each of the reported changes represented a change to the

temporal, social, or physical environment, which in turn increased the meaningful

participation of the child with disabilities. Given that the literature indicates

individualization of this type facilitates learning in each developmental domain (Lieber et al., 2008), further study of pedagogical documentation may create new practices that lead to better educational outcomes for children with disabilities in inclusive settings. In further disseminating imparting study results in relation to Bandura's theory, the processes within observational learning theory that guided new inputs to the system, specifically, learning and implementing pedagogical documentation, are discussed next.

Impact of Observational Learning

In further framing study results in Bandura's theory, the processes within observational learning theory that guided new inputs to the system, specifically, learning and implementing pedagogical documentation, are discussed next. Each component, as presented in relation to pedagogical documentation may hold insight pertinent to advancing the professional development of preservice and in service early educators.

Attention processes. Regarding attention process, participant level of education and years of classroom experience may have influenced the degree of change in the early educator's individualizing practices. As Bandura (1977) states, the individual's past experiences, perceptual abilities, and reasons for attempting to learn a new behavior impact their attention to the observed behavior, and this in turn impact how much the individual learns. In the current study, participants with similar educational and experiential backgrounds showed similar changes in their individualizing practices and use of pedagogical documentation. During Phase III, not only did they increase use of the same type of individualizing practices, but they also increased use of open-ended questions and visible listening. These same early educators, who started the study with

comparable degrees and time in their current classroom, also indicated a shared desire to continue use either collaborative interpretation or the entire pedagogical documentation process to support their individualizing efforts. When contrasted with results from the participant with a degree in psychology and least amount of time in her inclusive classroom, the importance of these characteristics on adopting new behaviors may be relevant.

Understanding the role of education and experience in the adoption of new teaching and individualizing behaviors can inform the delivery of in service professional development in early childhood education. This information could guide the formation of training groups during workshops and help to identify the level of support needed for early educators at varying points in their careers in a manner that optimizes the likelihood of implementation of presented practices.

Retention and motor processes. In contrast with observational learning literature and the supposition of the researcher, results suggest that factors of pedagogical documentation associated with retention processes, viz., observation and the documentation of the observation, did not have the most influence on changing early educator's individualizing behaviors. Whereas Buchanan and Wright (2011) and other researchers (Decker, 1980/1982; Christensen, Lignugaris-Kraft, & Fiechtl, 1996; DeQuinzio & Taylor, 2015; Rohbanfard & Proteau, 2011; Wang, Meltzoff, & Williamson, 2015) found that attention to the retention process facilitated generalization of learned skills across contexts, participants in the current study found the components of pedagogical documentation housed within motor reproduction most influential in

changing their individualizing practices and their interactions with the child with disabilities.

In accordance with the literature, one participant felt that observation, a retention process, most influenced changes in her individualizing practices. It was her intention to continue conducting pedagogical documentation observations, as she felt it best supported acquiring the knowledge needed to develop observation-based lesson plans, her primary form of individualizing.

Diverging from the literature, motor reproduction processes, which in this study related to the interpretation step of pedagogical documentation, appeared to have a greater impact (Buchanan & Wright, 2011; Christensen, Lignugaris-Kraft, & Fiechtl, 1996; Decker, 1980/1982; DeQuinzio & Taylor, 2015; Rohbanfard & Proteau, 2011; Wang, Meltzoff, & Williamson, 2015). According to participants, the strategies within and the products of collaborative interpretation were the most useful in guiding changes to their individualizing practices. It was also considered to be helpful in supporting teaching all of their students. Specifically, participants reported and were observed using collaborative interpretation with children outside of the study, and incorporating its use into other classroom activities.

Early educators believed that implementing collaborative interpretation positively influenced their practices and relationships with the child with disabilities because it increased amount of time and interactions with and instigated more interaction with the child. This finding aligns with past research results, as Jeffrey (1976) found that when more time is spent mentally rearranging and symbolically coding information acquired

through observation, individuals were more likely to achieve the desired outcome. Further, collaborative interpretation was identified by all but one participant as the component they would continue to implement, in part or in whole, within their respective classrooms.

Although the implementation step of pedagogical documentation fell within motor reproduction process, results did not indicate that it had any significant impact on changing the individualizing practices of participating early educators. This may be attributed to the fact that they were allowed to continue writing lesson plans, with only the addition of how it would be individualized for the target child, and implementing activities in the manner they were accustomed to prior to the study.

Implications for early educators. Professional development providers and researchers developing individualizing or other instructional strategies should note the significance of retention and motor reproduction processes in supporting changes to or adoption of new behaviors. Findings addressing these processes support the importance of providing early educators ample opportunities to cognitively reorganize and overtly practice new behaviors with target subjects to augment the likilihood of them altering their teaching behaviors. These findings reaffirm literature delineating supports for changing teacher behaviors though professional development (Powell & Diamond, 2011; Wayne, Yoon, Zhu, Cronen, & Garet, 2008). While child input contributes to cognitive reorganization within pedagogical documentation, the literature is also broadened to include the role of this type of input on altering teacher practices.

Further knowledge of the positive impact of retention and motor processes that precipitate recurring, joint analysis of information by the teacher and child with disabilities adds to understanding on building relationships between the former and the latter groups. In light of the continued presence and growth of children with disabilities in typical early education settings, early educators would benefit from gaining skills that would lead to the optimal inclusion of these children.

Motivational Processes

In terms of motivational processes, although participants found pedagogical documentation helpful in meeting the needs of the child with disabilities, only one intended to fully adopt pedagogical documentation. Each participant found the outcomes of implementing pedagogical documentation compelling enough to continue use of components of the process or the process in its entirety. In spite of their satisfaction with the changes in their individualizing practices and relationship with the child with disabilities they attributed to pedagogical documentation, only one was motivated enough to continue to use the entire process. While this aligns with literature that suggests behaviors which produce higher self-satisfaction are more likely than less satisfying behaviors to be repeated (Zimmerman & Kitsantas, 2002), most of the participants found the entire process too time consuming for ongoing implementation.

In addition to satisfaction with the outcomes of using pedagogical documentation, participants appeared to favor continuing to implement components of the process that best supported their existing individualizing practices and that conformed to their current teaching practices. For example, Julie found observation with pedagogical

documentation increased both her interactions with and awareness of the interests of her student with disabilities, and thus she stated plans to continue its use. Moreover, observations in general were the central source from which she gathered data applied to developing lesson plans and altered the learning environment to meet the needs of her students. The other two participants expressed the same sentiment regarding collaborative interpretation. Collaborative interpretation improved their relationship with their student with disabilities and reflected their existing practice of using open-ended questions and conversation to elicit information from their students, that they in turn applied to individualizing and lesson planning.

In summary, social cognitive theory lends support to understanding how pedagogical documentation influenced the individualizing practices of early educators. In addition, this research helps to corroborate the central tenet of reciprocal determinism, as implementing pedagogical documentation resulted in new behaviors, in early educators and the child, as well as in changes to their inclusive environment. A preponderance of data showed that changes in how early educators accessed information on the child with disabilities' interests, preferences, and thinking increased the amount of environmental strategies they used to individualize. While each component of observational learning facilitated some change, the components that required collaborative and recurring interactions, like those within retention and motor reproduction, between the early educator and the child had the greatest impact on changing early educator practices and relationships.

Suggested applications of the knowledge derived from these findings centered on the development of individualizing strategies and teacher training. Although additional study is needed, creating individualizing practices that require active input from the child with disabilities throughout may improve inclusion, and thus improve child outcomes. Moreover, teacher preparation programs could modify teacher training to include pedagogical documentation as a possibly viable means for strengthening the relationship between early educators and children with disabilities.

Individualizing and Pedagogical Documentation

As can be deduced from the results, pedagogical documentation had a positive impact on early educators' individualizing practices, teacher-child relationships, and perspective of the child with disabilities. Grounding these findings in the pedagogical documentation and individualization literature, as well as disseminating the pertinence of the results to addressing the research questions follows.

Changes to Individualizing Behaviors

Early educators adjusted their individualizing behaviors to include more frequent use of two environmental individualizing strategies: environmental supports and preference. Like Lieber et al (2008), environmental strategies were successfully used to facilitate participation and learning of children with disabilities across cognitive domains. Participants within the current study altered the social and temporal environment to individualize art, literacy, math, and science activities based on information gained through pedagogical documentation. This also represented a departure from a majority of individualizing studies in which these strategies were only applied to addressing a

specific learning domain (Gunter et al., 2005; Horn & Banerjee, 2009). With the increased attention on quality learning experiences for all young children, especially children with disabilities, the results of this study may prove beneficial in establishing ways to instigate their full participation in a host of activities used for cognitive development.

Further, the results supplement understanding on the impact of active input from children with disabilities on the individualizing practices of early educators and on the relationship between the teacher and the child with disabilities. Through the early educators' use of direct information from the child (i.e. questioning and conversations with the child) as obtained during the process of pedagogical documentation, they were able to develop more personalized strategies to individualize for the child and gain more understanding of the child's personality.

While there is a strong evidence base for individualizing strategies reliant on the child's response to the educators' actions or prompts, more is needed on this specific component. Thus, these results warrant pursuing more knowledge about actively involving the child with disabilities in shaping the individualizing process.

Comparison to Pedagogical Documentation Literature

In regards to use of pedagogical documentation, findings from the current study were similar to those of Buldu (2010), Suárez and Daniels (2009), and other researchers (Katz & Galbraith, 2006; Macdonald, 2007). In each study, early educators developed a better understanding of children's social or social language skills from information

gathered while implementing the process. Moreover, findings from this study mirrored other studies (Katz & Galbraith, 2006; Macdonald, 2007; Suárez & Daniels, 2009) which found the implementation of pedagogical documentation to be a time-consuming endeavor. The decision of some participants who felt the benefits of the process compensated for this shortcoming also reflects existing knowledge on use of the process within early education settings in the United States (Suárez & Daniels, 2009). Given that sustained use of a time-consuming practice is not typical (Purdue, 2009) these repeated findings that the benefits of pedagogical documentation mitigate its disadvantages merits additional exploration. Results from inquiries of this nature could identify factors needed to overcome the same type of barriers in other effective, yet time consuming practices designed for use in inclusive environments.

As reported in previous studies, pedagogical documentation supported early educators' attempts to teach and include children with disabilities in meaningful ways. Comparable to Katz and Galbraith (2006) and Suárez and Daniels (2009), use of pedagogical documentation produced knowledge on the peers with who the child with disabilities interacted most frequently, as well as the social dynamics that resulted in greater participation of the child with disabilities. For early educators working in inclusive environments, acquiring knowledge and skill in implementing pedagogical documentation may optimize their capacity to include children with disabilities in meaningful ways.

In further accordance with the literature, participating early educators used child related knowledge resulting from the process to help their student with disabilities work

on social and language IEP goals. Through information gained from pedagogical

documentation, the respective early educators created social and learning situations that

included the child's preferred peers, learning center, or topic of most interest to foster the

child's verbal and social interactions.

Another finding similar to the literature, was that participants regarded

collaboration, in the case of this study, between the teacher and the child as a valued and

productive aspect of pedagogical documentation. Across studies the timing, the

placement of collaboration within the process, or the people taking part in the

collaboration did not appear to limit perceptions of its vital role in pedagogical

documentation. Although this study did not focus on collaboration between teachers as

in one study (Suárez & Daniels, 2009), or between therapist, teachers, and families

(Cooney & Buchanan, 2001), participating early educators' felt that the collaboration

which occurred during collaborative interpretation gave them the most insight on the

child with disabilities. Whereas in Suárez and Daniel's (2009) study collaboration

occurred between teachers, as well as between teachers and therapists, collaboration

between the teacher and the child was at the center of the pedagogical documentation

process used within this study. Nonetheless, results from each study indicated that

teacher-child collaboration had a positive impact on the early educators teaching

practices and understanding of the child. These findings extend current knowledge on the

benefits of collaboration in early childhood special education by illuminating the impact

of teacher-child collaboration on early educators' attempts to individualize instruction.

Unlike other research, results from this study indicated that the process provided greater understanding of the interests and preferences of the child, as opposed to knowledge of their abilities or progress. This contrasted with Buldu (2010), Cooney and Buchanan (2006), and Macdonald (2007), where the authentic information obtained through pedagogical documentation was applied to: (a) developing more challenging activities, (b) setting future learning goals, and (c) monitoring the progress of CLD children and children with disabilities. In the current study, participants reported using the new understanding of the child's interests solely to develop learning experiences that addressed current IEP goals and to create social situations to increase the participation of the child. One factor relevant to the current study which may account for the aforementioned result is participants' definition of individualization. As described in the results section, each participants' definition of individualizing centered on discovering the child's interests. Thus, they may have limited applying the information in the previously mentioned fashion because they only equated individualization with understanding and using the interests of the child within lessons and activities. However, had each participating early educator been trained and operating under a uniformed and widely accepted definition of individualization, they may have taken more liberty in how they approached individualizing. Hence, a case can be made for establishing and promoting a uniformed definition of individualization across the field of early childhood education through both preservice and in service training.

Oher findings that departed from the literature were reported changes to the learning behaviors of the participating child with disabilities. The children with

disabilities within the study began to initiate more interactions with their teacher and

peers. They also made more attempts to contribute to and participate in small and large

group activities. Until this study, there was minimal information on the impact of

engaging in the process of pedagogical documentation on young children with

disabilities' level of participation in group activities or their social interaction with

teachers and peers. While existing literature included young children with disabilities,

these studies focused primarily on the practices of teachers or therapists (Buldu, 2010;

Cooney & Buchanan; Macdonald, 2007; Suárez & Daniels, 2009). In the same way, this

study was designed to explore changes in early educators' individualizing practices that

could be attributed to pedagogical documentation, therefore no measures were in place to

specifically capture changes in the child with disabilities. Thus, the only evidence of the

reported changes was obtained from early educator interview data.

Another distinct finding of this study was early educators' use of pedagogical

documentation to adjust other areas of their teaching practices. Participants stated that

the process helped them better understand the needs of other children in the class and to

reflect on their teaching practices. This type of finding was not reported in previous

studies of pedagogical documentation in inclusive preschools within the United States.

Throughout the preceding section results were discussed in relation to the

research questions, as well as to the literature on pedagogical documentation and

individualization. The stated changes in participating early educators' use of

environmental individualizing strategies demonstrated the positive impact of pedagogical

documentation on their individualizing practices. Evidence shared indicated that they

attributed knowledge of the child gained through use of pedagogical documentation with strengthening their relationship with their student with disabilities. When compared with existing literature, the results presented reaffirm and extend what is known about early educators' experiences implementing pedagogical documentation within inclusive US preschool classrooms.

Limitations

Although designed to thoroughly address each of the three research questions, there were limitations associated with the current study. Primarily, the small number of participants precludes generalizing the results to the many and varied population of early educators. The four participating early educators and their respective early education environments represent just a minute fraction of the child care professional and programs within the United State. However, the diversity in participants' years of experience, classroom settings, and student demographics may provide insight on pedagogical documentation for early educators working under similar circumstances.

Second, the educational level of the participants presents an additional limitation. According to results from the United States Department of Health and Human Services' National Survey of Early Care and Education (USDHH, 2013), 55% of teachers working with three-to-five-year old children did not possess a Bachelor's degree. Thus, the experiences and perceptions of early educators within the current study might vary to some degree from the average early educator.

Third, a majority of the participating children with disabilities were diagnosed with a speech or language delay, and thus the results of the study do not provide insight

on use of the process with young children with profound disabilities or who have severe communication delays. While one child was diagnosed with autism, his delays in communication skills were not considered severe or profound.

Fourth, the technical issues experienced by the participant attempting to access the modules using a tablet computer may have influenced the participants learning experience. These impediments set the learning experience of one participant apart from that of the other participants. However, because the effected participant was able to achieve similar results on module assessments and competence in implementing pedagogical documentation represented the impact of the technical issues may be negligible.

Finally, based on data reported by participants indicating use of some targeted constructs, such as use of photography to document the child's progress or modeling, the procedures used within the study may not have detected full extent of participant use of individualizing practices. Because participants were only observed during small or large group activities, individualization that may have occurred during free play, outside activities, or daily routines (i.e. meals, arrivals, departures) may not have been captured. However, from these limitations, as well as findings from the study, direction for future research projects examining pedagogical documentation emerged.

Recommendations for Future Research

As anticipated, the current study adds to existing literature by illustrating the impact of pedagogical documentation on including children with disabilities in early childhood classrooms within the U.S. Future research projects may extend knowledge by

replicating this study using participants and settings that more accurately represent the level of quality in early education settings and educational credentials of early education professionals in this country. When coupling this information with the increase in children with disabilities enrolling in typical child care programs (OSEP, 2001, 2014), seeking empirical evidence of the utility of pedagogical documentation in these settings is warranted. Further, examining the process under the aforementioned circumstances could extend understanding of how to support a greater population of early educators.

Beyond individualizing, the reported changes in the learning behaviors of the participating children with disabilities presents an additional avenue for study. Outcomes for these children could be improved through greater understanding the role of pedagogical documentation in altering the dynamics that created more learning opportunities and greater inclusion of children with disabilities.

Future research of pedagogical documentation and teacher-child interaction would benefit early educators' efforts to improve the quality of care for children with disabilities through building relationships. Pedagogical documentation, and the meaningful conversations therein, offers early educators a way to develop their "sensitivity and responsivity towards children's signals" (p.1652, Fukkink &Tavecchio, 2010). Abilities such as these are factors Shonkoff and Phillips (2000) and others found vital to building and maintaining the relationships associated with high quality care (Clarke-Stewart & Allhusen, 2005; Kontos & Wilcox-Herzog, 1997).

The fields of early childhood education and early childhood special education may benefit from the study of pedagogical documentation as a tier two strategy within a

multi-tiered system of support (MTSS).   With the shift towards implementing MTSS at the preschool level, there is a need for age appropriate strategies that help reveal keys to providing each child with instruction specifically attuned to their needs. As the research literature and the study's participants noted, pedagogical documentation facilitated identifying nuances in the child's learning behaviors and preferences that helped the early educator meet the unique needs of all their students.   Hence, replicating this research within an MTSS environment could lead to developing an MTSS strategy specifically suited for a preschool environment.

Summary

A considerable literature base exists supporting the benefits of implementing pedagogical documentation within early education setting to educate and include diverse groups of children.   However, most of the literature relates to preschool settings outside of the US and its early childhood special education system. The current study expands the depth of knowledge on this topic to include the impact of pedagogical documentation on the individualizing practices of early educators working in inclusive environment within the U.S.

The purpose of this study was to explore and examine changes to the teaching practices of four early educators after learning and implementing pedagogical documentation with young children diagnosed with a disability. Findings indicate that participants increased their use of environmental individualizing strategies and enhanced their efforts to include children with disabilities. Early educators also reported positive changes in the teacher-child relationship, as well as changes in the learning behaviors of

the child with disabilities. Future research on the topic could expand understanding on

supporting inclusion in preschool settings and development of age appropriate

interventions for use in early childhood MTSS.

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APPENDIX A

DOCUMENTATION ARTIFACT PRODUCTION

Documentation Artifact Development Form

Child's name: _____   **Observer**: _____**Date**: _____

Photo 1-   Photo 2-

Setting:

DESCRIPTION	INTERPRETATION
Objectivity Subjective description of photographed interaction	
Directness Observation description contains direct quotes	
Mood Describes social and emotional details of photographed situation	
Specificity Specific details, such as number of children and adults involved, kinds of materials and time span of activity	
Completeness Photographed interaction described as having a beginning, middle, and end	

APPENDIX B

PEDAGOGICAL DOCUMENTATION COLLABORATIVE INTERPRETATION CHECKLIST

Date: _____   **Start time:** _____ **End time:** _____
Setting:

COMPONENT	EVIDENCE
Procedural- Number of children (circle) 1 2 3 4 5 Artifact prominently displayed and visible to each child in group Children create their own artifact Recording method used by teacher (notes, audio)	
Use of Artifact (photograph & interpretation) Artifact used to stimulate conversation Interpretation questions used to gain child's perspective of artifact Teacher shares her interpretation and attempts answer questions raised in her interpretation of the observation/artifact	
Collaboration **Questioning Skills** Use of questions to stimulate thinking of child such as: What's going on in this picture? What do you see? What do you see that makes you say that? Use of questions to deepen thinking of child, such as: *Why...?* *How would it be different if...?* *What are the reasons...?* *Suppose that...?* *What if...?* *What if we knew...?* *What is the purpose of...?* *What would change if...?*	

COMPONENT	EVIDENCE
Listening Skills - Ample time given to children to thoughtfully respond - Teacher thoughtfully responds to children's questions and answers. Uses open-ended questions to response to child's questions and answers.	

APPENDIX C

INDIVIDUALIZING PRACTICES OBSERVATION GUIDE

Individualizing Practices Observation Guide	
Name: **Total Minutes:**	**Time**
Interactional	
Embedded learning opportunities: The creation of learning opportunities for children with disabilities to practice individual goals and objectives within a typically occurring, meaningful and interesting activity or event in a manner that expands, modifies or adapts the activity/event to facilitate the child's maximum participation (Bricker, Pretti-Fronczak, & McComas, 1998)	
Human support: Occurs when an adult or peer models a target behavior or skill to the child with disabilities through interactive play, praise or verbal encouragement (Horn et al., 2002)	
Modeling: Technique in which teacher first completes the task or behavior while child watches students then repeats the assigned task, copying the teacher's methods while working at their own pace (Ledford & Wolery, 2013)	
Mand-Modeling: A strategy in which questions and modeling are used to produce a targeted behavior. The process begins with the teacher observing the child and noting his focus of attention. When the focus of attention is determined and joint attention is established between teacher and child, the teacher provides a mand (a non-yes/no question) and provides a short response interval. If the child responds correctly, the child praises the child and terminates the interaction. If the child does not respond correctly, the teacher provides a model, a response interval and consequences as appropriate (Hancock & Kaiser, 1996).	
Prompting: A procedure of providing either an ascending (least to most) or descending (most to least) level of provocation aimed at eliciting target response from child. If the child makes an error or does not produce desired response the next level of provocation is enacted (Neitzel & Wolery, 2009).	
Time delay: Constant time delay, a variation of progressive time delay, is a response prompting strategy designed to provide and remove prompts in a systematic manner on a time dimension. Constant time delay has two defining characteristics: (a) initial trials involve presentation of the target stimulus followed immediately by delivery of a controlling prompt; and (b) on all subsequent trials, the target stimulus is presented, a response interval of a fixed duration is delivered, the controlling prompt is provided, and a second response interval is delivered as needed (Wolery et al., 1993).	

Individualizing Practices Observation Guide	
Name: **Total Minutes:**	**Time**
Environmental	
Environmental support: Refers to adults altering the physical, social, and temporal environment in order to promote the child's participation, engagement, and learning (Horn & Banerjee, 2009)	
Invisible support: Occurs when adults rearrange aspects of naturally occurring activities to support the child's success in participating (Horn & Banerjee, 2009)	
Material adaptation: Occur when teachers modify materials so that the child can participate as independently as possible (Horn & Banerjee, 2009).	
Preferences: Refers to adults identifying child preferences and integrating them into the activity to make it more motivating (Horn & Banerjee, 2009).	
Simplification: Refers to adults breaking a complicated activity into smaller parts or changing or reducing the steps involved (Horn & Banerjee, 2009).	

Individualizing Practices Observation Guide	
Name: **Total Minutes:**	**Time**
Special Equipment: Includes homemade as well as commercially available therapeutic equipment (Horn & Banerjee, 2009).	
Components of Pedagogical Documentation	
Open-ended Questioning:	
Visible Listening:	

Individualizing Practices Observation Guide		
Name: **Total Minutes:**		**Time**
Components of Pedagogical Documentation		
Use of photography		

APPENDIX D

SURVEY

Individualizing Practices Survey

Q1. What is your age?

Q2. What is your sex?

        ○ Female (1)
        ○ Male (2)

Q3. What is your race? Check all that apply

❑ American Indian or Alaskan Native (1)
❑ Asian (2)
❑ Black, or African American (3)
❑ Native Hawaiian or Pacific Islander (4)
❑ White (5)

Q4. Are you Hispanic, Latino, or Spanish origin? Check all that apply:

❑ No, not of Hispanic, Latino, or Spanish origin? (1)
❑ Yes, Mexican, Mexican American, Chicano (2)
❑ Yes, Puerto Rican (3)
❑ Yes, Cuban (4)
❑ Yes, another Hispanic, Latino, or Spanish origin; please specify (5)

        _____

Q5. What is your current position?

- ○ Infant/Toddler teacher (1)
- ○ Preschool Teacher (3 to 5 year olds) (2)
- ○ Preschool Teacher (3 to 4 year olds) (3)
- ○ PreK Teacher (4)
- ○ Other (Please specify (5) _____

Q6. How long have you been in your current position?

Q7. How long have you been in the field of Early Childhood Education?

Q8. With which age group do you primarily work?

Q9. In what type of setting are you employed?

- ○ Public school (1)
- ○ Private school (2)
- ○ Child care program (3)
- ○ Head Start (4)
- ○ Other, please specify (5) _____

Q10. What is the highest level of education you have completed?

- ○ 4-year college degree (Bachelor's) (5)
- ○ Some Master's coursework (6)
- ○ Masters degree (8)
- ○ Doctoral degree (4)
- ○ Other, please specify (10) _____

Q11. Do you hold a teaching license in the state you reside?

- ○ Yes (1)
- ○ No (2)

Q12. What type of teaching license do you possess?

- ○ Birth - Kindergarten (1)
- ○ Kindergarten- 3rd grade (2)
- ○ Kindergarten- 5th grade (3)
- ○ Middle grades (4)
- ○ High School (5)
- ○ Other, please specify (6) _____

Q13. How many children with special needs are currently enrolled in your class?

Q14. What is the diagnosis of the child with disabilities currently participating in the pedagogical documentation study?

Q15. Which of the following curriculum is used in your classroom

- ❑ Emergent (1)
- ❑ Observation-based (2)
- ❑ Reggio Emilia approach (3)
- ❑ Creative Curriculum (4)
- ❑ Inquiry-based (5)
- ❑ Other, please specify (6) _____

Q16 PLANNING AND INSTRUCTIONAL PRACTICES. How often do you conduct the following planning practices

	Never (1)	Less than Once a Month (2)	Once a Month (3)	2-3 Times a Month (4)	Once a Week (5)	2-3 Times a Week (6)	Daily (7)
a) How often do you plan lessons and activities for your classroom? (1)							
b) How often do you involve the children in the lesson planning process (2)							
c) How often do you develop lesson plans based on the interest or preferences of the children (3)							

Q17. How often do you employ the following instructional practices?

	Never (1)	Annually (2)	Semi-annually (3)	Quarterly (4)	Once a Month (5)	2-3 Times a Month (6)	Once a Week (7)	2-3 Times a Week (8)	Daily (9)
a) Plan curriculum and instruction for all domains of development (1)									
b) Develop periodic goals for individual children (2)									
c) Develop periodic goals for the whole group (3)									
d) Work with small groups of children with similar needs (4)									
e) Work with small groups of children with varying levels of skills (5)									
f) Use supplemental literacy curriculum (e.g., Ladders to Literacy, Road to the code) (6)									
g) Use supplemental math curricula (e.g., Building Blocks for Math, Pre-K Mathematics) (7)									

h) Use evidence-based (or research-based) methods or instructional strategies (8)								

Q18. In your current position, to what degree do you feel you have the freedom to plan and carry out curriculum and instruction the way you want to?

- ❍ Not at All Free (1)
- ❍ Somewhat Free (2)
- ❍ Free (3)

Q19 COLLABORATIVE PRACTICES (Defined as working with one or more other individuals to complete a task, such as lesson planning or assessing children)19). How often do you collaborate with an co-teacher or assistant for the following purposes:

	Never (1)	Less than Once a Month (2)	Once a Month (3)	2-3 Times a Month (4)	Once a Week (5)	2-3 Times a Week (6)	Daily (7)
a) To plan lessons and activities for your classroom? (1)							
b) To conduct assessments? (2)							
c) To change the room arrangement? (3)							
d) To add or remove toys and equipment (4)							
e) Other (5)							

Q20. How often do you collaborate with the children for the following purposes?

	Never (1)	Less than Once a Month (2)	Once a Month (3)	2-3 Times a Month (4)	Once a Week (5)	2-3 Times a Week (6)	Daily (7)
a) To plan lessons and activities for your classroom? (1)							
b) To conduct assessments? (2)							
c) To change the room arrangement? (3)							
d) To add or remove toys and equipment? (4)							
e) Other (5)							

Q21 ASSESSMENT & SCREENING PRACTICES. How frequently do you conduct the following types of assessments?

	Never (1)	Annually (2)	Semi-annually (3)	Quarterly (4)	Once a Month (5)	2-3 Times a Month (6)	Once a Week (7)	2-3 Times a Week (8)	Daily (9)
a) For universal screening (brief assessments conducted with all students, used to compare child's performance to established criterion or benchmark) (1)									
b) For progress monitoring (student learning is regularly evaluated to provide useful performance feedback to teachers or parents) (2)									
c) For instructional planning (3)									
d) Other (4)									

Q22. How frequently do you use the following to collect and record assessment data on the children in your class?

	Never (1)	Annually (2)	Semi-annually (3)	Quarterly (4)	Once a Month (5)	2-3 Times a Month (6)	Once a Week (7)	2-3 Times a Week (8)	Daily (9)
a) Observation (1)									
b) Curriculum-based assessments (2)									
c) Developmental checklists (3)									
d)Anecdotal records (4)									
e) Photographs (5)									
f) Video/audio recordings (6)									
g) Running records (7)									
(h)Journals/Notebooks (8)									
i)Other (please specify) (9)									

INDIVIDUALIZING PRACTICES (Defined as the environmental, interactions, instructional, and planning strategies used to meet the needs of children with disabilities or special needs. Q23. How familiar are you with the following terms and practices?

	Not Familiar (1)	Somewhat Familiar (2)	Familiar (3)	Very Familiar (4)
a) Pedagogical Documentation (a collaborative process between adults and children by which concrete examples of an individual child's thinking are observed, analyzed, and interpreted and then applied to extend learning and creating learning experiences) (1)	○	○	○	○
b) Visible Listening (the intentional act of listening to children in which the adult reflects on the child's words and actions, allows the child ample time to respond to questions, and uses open ended questions to support the child's thinking process. (2)	○	○	○	○
c) Documentation Panel (a graphic display, which includes photographs, statements, and artwork, documenting from beginning to end the learning experience of a child or group of children. (3)	○	○	○	○

Q24. During interactions and conversations with the children in your class, how many open-ended questions (i.e. unstructured question in which possible answers are not suggested, and the respondent answers it in his or her own words or that require more than a yes or no response) do you use?

- ❍ I do not use open-ended questions (1)
- ❍ 1-3 open-ended questions (2)
- ❍ 4-6 open-ended questions (3)
- ❍ 7 or more open-ended questions (4)

INDIVIDUALIZING PRACTICES (Defined as the environmental, interactions, instructional, and planning strategies used to meet the needs of children with disabilities or special needs)

25. How prepared are you to implement the following individualizing practices and strategies:

	Not Prepared (1)	Minimally Prepared (2)	Somewhat Prepared (3)	Adequately Prepared (4)	Very Well Prepared (5)
a) To individualize instruction for children with special needs (1)					
b) To include children with special needs in all classroom activities (2)					
c) To develop lessons and activities that are appropriate for all children in my class. (3)					
d) Environmental supports (e.g., altering the physical environment, social environment, or temporal environment) (4)					
e) Material adaptation (modify materials to facilitate child's independent use and participation) (5)					
f) Special equipment (allows child to participate or increase child's level of participation) (6)					

g) Use of child preference (identify child's preferred interest or item and use it as motivation to engage in specific task) (7)					
h) Adult supports (teacher models behavior, joins in child's play, praises child, or provides encouragement) (8)					
i) Modeling (teacher or adult first complete the task while students watch. Student then repeats assigned task, copying teacher's methods while working at their own pace) (9)					
j) Prompting Strategies (systematic strategy of providing prompts/hints and then gradually removing them) (10)					

k) Incidental Teaching (child initiation and interest is used as a catalyst to maximize opportunities to respond, elaborate and extend child learning) (11)				
l) Time delay (educator waits a predetermined amount of time prior to lending the assistance needed for the child to respond accordingly or to engage in the expected task) (12)				
m) Pedagogical Documentation (a collaborative process between adults and children by which concrete examples of an individual child's thinking are observed, analyzed, and interpreted and then applied to extend learning and creating learning experiences. (13)				

Q26. How often do you use individualizing strategies with children with disabilities during the following activities:

	Never (1)	Less than once a week (2)	Once a week (3)	2-3 times a week (4)	4-6 times a week (5)	Once a day (6)	More than once a day (7)
a)Teacher directed small group activities (1)							
b)Teacher directed large group activities (2)							
c) Child directed activities indoors (3)							
d) child directed activities outdoors (4)							

Q27. In the past six months, have you used the following individualizing strategies in your practice

	Yes (1)	No (2)
a) Environmental supports (e.g., altering the physical environment, social environment, or temporal environment) (1)	○	○
b) Material adaptation (modify materials to facilitate child's independent use and participation) (2)	○	○
c) Special equipment (allows child to participate or increase child's level of participation) (3)	○	○
d) Use of child preference (identify child's preferred interest or item and use it as motivation to engage in specific task) (4)	○	○
e) Adult supports (teacher models behavior, joins in child's play, praises child, or provides encouragement) (5)	○	○
f) Modeling (teacher or adult first complete the task while students watch. Student then repeats assigned task, copying teacher's methods while working at their own pace) (6)	○	○
g) Prompting Strategies (systematic strategy of providing prompts/hints and then gradually removing them) (7)	○	○
h) Incidental Teaching (child initiation and interest is used as a catalyst to maximize opportunities to respond, elaborate and extend child learning) (8)	○	○
i) Time delay (educator waits a predetermined amount of time prior to lending the assistance needed for the child to respond accordingly or to engage in the expected task) (9)	○	○
i) Pedagogical documentation (a collaborative process between adults and children by which concrete examples of an individual child's thinking are observed, analyzed, and interpreted and then applied to extend learning and creating learning experiences) (10)	○	○

APPENDIX E

INTERVIEW QUESTIONS

Sample Phase I & Phase III Interview Questions

Phase I Interview questions

- In the past 6 months have you received training or professional development on the following topics, if so please describe:
    - o Individualizing for children with disabilities
    - o Pedagogical documentation
    - o Collaboration
    - o Reggio Emilia approach
    - o Inclusion
- Please describe your current lesson planning process
- With who do you plan lessons and activities?
- What is the role of the child in your lesson planning process?

Individualizing Practices

- Please share your definition of individualizing practices.
- Please describe the strategies you use to support children with disabilities participation in typical classroom activities and:
    - o Small group activities
    - o Large group activities
- Please describe any changes you have made to the physical classroom environment to accommodate the needs of the child with disabilities.
    - o Describe changes to materials
    - o Describe changes to classroom schedule or order of activities
- Please share your definition of the following strategies:
    - o Time delay
    - o Prompting
    - o Modeling/Mand-Modeling
    - o Embedded Learning Opportunities

Phase III Interview Questions

Pedagogical Documentation Module
- Tell me about your experience with the pedagogical documentation module
- What aspects of the module were most effective in conveying information about pedagogical documentation?
- What aspects of the module were the least effective in conveying information about pedagogical documentation?
- What changes would you make to the module?

Pedagogical Documentation
- What were the benefits to using pedagogical documentation?
- What were the challenges to using pedagogical documentation?
- How did using pedagogical documentation impact:
    - Your overall planning practices
    - Your planning practices for children with special needs?
    - Your ability to include children with special needs
    - Your relationship with the children in your class?
    - How useful was pedagogical documentation as an individualizing practice? Please explain?
    - Give me an example of how your individualizing practices have changed since completing the training
    - What else would you like to share about
        - your current individualizing practices?
        - your experience with pedagogical documentation?

APPENDIX F

FIELD NOTES FORM

Field Notes Form
Date_____
Time_____
Place of Observation: _____

Description of Setting	Personal Reflections

APPENDIX G

STUDY FLYER

<u>Pedagogical Documentation Study</u>

Pedagogical documentation, a foundational practice of the Reggio Emilia approach, has been used by educators across the globe to make visible the learning and thinking processes of young children. Help us understand how pedagogical documentation influences the individualizing practices of early childhood professionals in working with young children with special needs.

<u>Purpose of this Study:</u>
- To gain understanding of the impact of pedagogical documentation on the individualizing practices of early childhood professionals.

<u>Potential Benefits:</u>
- Learn a new technique for individualizing instruction
- Gain deeper understanding of your student's knowledge and thought processes

<u>Participation open to early childhood educators in Guilford County who:</u>
- Work as co-teacher or lead teacher in inclusive classrooms for children age 3- 4.
- Have a minimum of 3 years' classroom teaching experience
- Hold a bachelor's degree or higher
- Engage in observation/ child interest-based planning or other forms of emergent curriculum
- Work in programs granted a 3 to 5 NC Star Rated License
- Work in full day private or public child care program

<u>Requirements for Teachers:</u>
- Allow researcher to conduct pre and post training observations of classroom activities
- Complete pre-training survey on individualizing practices
- Complete an online pedagogical documentation training module
- Implement pedagogical documentation process for a minimum of 6 weeks
- Consent to be interviewed

- Up to 30 hours of participation over a 12-week period (paperwork, workshop and completion of online training module)

When and Where:
- Classroom observations based on teacher preference and availability of researcher
- Interviews will occur within 2 weeks of completing data collection and at convenience of participant and researcher
- January 2016 – December 2016

Compensation:
- Paid substitute if needed during coaching session
- $150 gift certificate (distributed in $50 increments throughout study)
- Retain documentation materials and equipment (digital camera, printing supplies, composition notebook)

*Choosing not to participate or to withdrawing from the will have no effect on your employment.

Contact Info:
Dionne Sills Busio, M.Ed.
Principle Investigator/ Doctoral Student, UNCG
336.508.8367, dsbusio@uncg.edu

APPENDIX H

CONSENT FORM

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

CONSENT TO ACT AS A HUMAN PARTICIPANT

Project Title:

Principal Investigator and Faculty Advisor:

Participant's Name: _____

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in the study is voluntary. You may choose not to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. There may not be any direct benefit to you for being in the research study. There also may be risks to being in research studies. If you choose not to be in the study or leave the study before it is done, it will not affect your relationship with the researcher or the University of North Carolina at Greensboro.

Details about this study are discussed in this consent form. It is important that you understand this information so that you can make an informed choice about being in this research study.

You will be given a copy of this consent form. If you have any questions about this study at any time, you should ask the researchers named in this consent form. Their contact information is below.

What is the study about?
This is a research project. Your participation is voluntary. You are invited to participate in the study. The study will involve a total of approximately 20 early educators between November 1, 2015 and December 31, 2016.

What will you ask me to do if I agree to be in the study?
If you agree to participate in this multi-phased study, you will be asked to: a) permit researcher to observe your implementation of classroom activities, b) complete a two part training module on how to implement pedagogical documentation, c) receive classroom support on pedagogical documentation from the researcher; d) implement pedagogical documentation with a minimum of 3 students enrolled in your class, e) complete one pre-training surveys (regarding your current knowledge and use of individualizing practices), and f) participate in an interview to ascertain your perception of your experience in using pedagogical documentation.

The purpose of Phase I is to record participants' existing individualizing practices. This information will be obtained through participant completion of a survey included at the beginning of the pedagogical documentation training module. The researcher will also conduct classroom observations of your individualizing practices prior to your beginning the training module. During later phases of the research project classroom observations will also be conducted as a component of the fidelity checks needed to gauge the acquisition of skills learned during each section of the training module. The time requirements during phase one includes approximately 30 minutes to complete the pre-training survey, a total of 4 hours for the researcher to conduct classroom observations, and a 30 to 45-minute interview. Throughout the study a total of 6 additional observations, enduring 30 minutes or less will be conducted.

In Phase II participants will complete a two part online pedagogical documentation training module. The module includes information on the history of pedagogical documentation and instruction on implementing pedagogical documentation. After completing each part of the module, participants' understanding of module content will be assessed through researcher observation of the participant implementing pedagogical documentation as a part of the typical activities occurring in the classroom. Participants are only required to conduct the pedagogical documentation activities with the children of families consenting to participate in the study. Participants will have 5 weeks from beginning the module to complete the online training and associated activities. As designed, the instructional portion of the module should take six hours or less to complete, whereas the time needed for the teacher to apply the skills presented in the module in his or her classroom setting depends upon the learning style and schedule of the participant.

Implementing pedagogical documentation will require participants to take and analyze photographs of students enrolled in their class as the student engages in either small group, large group or one on one interactions. The participant will share and discuss the photograph with the child during a small group activity to uncover the child's interpretation of the photograph. Both the photograph and the written interpretations of the teacher and child will be shared with the researcher. The researcher will obtain consent to photograph students from families who agree to participate in the study.

During Phase II fidelity checks, in the form of verbal, graphic and written feedback, of participant implementation of pedagogical documentation during the training phase of the study will be conducted. At least once a week, in the three weeks following completion of the training module, the researcher will observe and record participant use of pedagogical documentation in the classroom setting. Within two weeks of the final observation session each participant will be interviewed by the researcher. The interview will take approximately 45 to 60 minutes to complete. In total participation in this study will require 20 to 25 non continuous hours over the course of 9 weeks.

The information for this study is being gathered only for the purposes of examining your perceptions on the use of pedagogical documentation as an individualizing strategy. The information will not be used to evaluate your performance as an educator. Therefore, no information about individual perspectives will be shared and all information will be collapsed together for an overall view of changes in perceptions of early childhood educators. Only the researcher will have access to this information and it will be treated with confidentiality.

Is there any audio/video recording?
During each phase of the study data from participants with be video or audio recorded. Because your voice will be potentially identifiable by anyone who hears the tape, your confidentiality for things you say on the tape cannot be guaranteed although the researcher will try to limit access to the tape as described below.

Why are you asking me?
Early educators meeting the following criteria are being asked to participate in the current study: (a) currently employed as a full-time co-teacher or lead teacher in an inclusive classroom environment, (b) have three or more years of classroom teaching experience, (c) possess a bachelor's degree, and (d) are currently employed in a three to five-star North Carolina licensed public or private child care program.

What are the risks to me?
The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risk to participants. If you have questions, want more information or have suggestions, please contact Dionne Sills-Busio (dsbusio@uncg.edu) who may be reached at (336) 508 - 8367 or Belinda J. Hardin (bjhardin@uncg.edu. If you have any concerns about your rights, how you are being treated, concerns or complaints about this project or benefits or risks associated with being in this study please contact the Office of Research Integrity at UNCG toll-free at (855)-251-2351.

Are there any benefits to society as a result of me taking part in this research?
A potential benefit to society as a result of this study may be increased knowledge on meeting the individual needs of young children with special needs. Although pedagogical documentation has been used around the world in a variety of educational settings, very little is known about its usefulness in the American education system.

Are there any benefits to *me* for taking part in this research study?
Benefits include acquiring knowledge and skill on implementing an alternative documentation process. Furthermore, the study will contribute to the literature on the documentation practices that assist educators in working with children with special needs.

Will I get paid for being in the study? Will it cost me anything?
There is no cost to you for participating in the study. Each participating early educator will receive a total of $150 in gift cards and retain possession of a pedagogical documentation equipment package. The equipment package will include (a) a digital camera, (b) printing supplies, and (c) composition notebooks. Compensation in the form of gift cards will be dispersed at the conclusion of Phase II and Phase III of the study. If you elect to withdraw from the study prior to completion no further compensation will be given and the camera, and reading materials must be returned to the researcher.

How will you keep my information confidential?
All information obtained in this study is strictly confidential unless disclosure is required by law. Confidentiality for participants will be ensured by assigning identification numbers and removing any/all names associated with the interviews or data prior to data coding and analysis. The master list, in hard copy form, created to link participants to their study ID numbers will be stored in a separate file cabinet located in the office of the principle investigator. All electronic copies of the

data and master list will be stored within a password protected file on the personal computer of the principle investigator. All data will be retained for five years following the completion of the study or until the data have been analyzed and written up for dissemination. At that time, all questionnaire data, permission forms, and project notes will be shredded. Dr. Hardin will have access to the personal data on participants and have signed confidentiality agreements. Moreover, any storage devices containing the digital data will be kept in a locked file cabinet in the office of Dr. Belinda Hardin. In regards to data collected electronically, specifically the individualizing practices survey included in the training module, absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited protections of Internet access. Please be sure to close your browser when finished so no one will be able to see what you have been doing.

What if I want to leave the study?
You have the right to refuse to participate or to withdraw at any time, without penalty. If you do withdraw, it will not affect you in any way. Choosing not to participate or withdrawing from the study will not affect your employment with the child care center. If you choose to withdraw, you may request that any of your data which has been collected be destroyed unless it is in a de-identifiable state. The investigators also have the right to stop your participation at any time. This could be because you have had an unexpected reaction, or have failed to follow instructions, or because the entire study has been stopped.

What about new information/changes in the study?
If significant new information relating to the study becomes available which may relate to your willingness to continue to participate, this information will be provided to you.

Voluntary Consent by Participant:
By signing this consent form/completing this survey/activity (used for an IRB-approved waiver of signature) you are agreeing that you read, or it has been read to you, and you fully understand the contents of this document and are openly willing consent to take part in this study. All of your questions concerning this study have been answered. By signing this form, you are agreeing that you are 18 years of age or older and are agreeing to participate, or have the individual specified above as a participant participate, in this study described to you by Dionne Sills-Busio.

Signature: _____ Date: _____

APPENDIX I

FAMILY RECRUITMENT FLYER

UNCG School *of* Education

IDEAs that Work
Office of Special Education Programs

Pedagogical Documentation Study

Pedagogical documentation, a foundational practice of the Reggio Emilia approach, has been used by educators across the globe to make visible the learning and thinking processes of young children. Help us understand how pedagogical documentation influences the individualizing practices of early childhood professionals in working with young children with special needs. The study also explores how the design of the training module impacts teacher instructional self-efficacy.

Purpose of this Study:
- To gain understanding of the impact of pedagogical documentation on the individualizing practices of early childhood professionals.

Who Can Participate?
- Children age 3 to 4
- Children enrolled in the classroom of a participating teacher

Participating Children will:
- Engage in small group activities with teacher and peers in which they share their thoughts and analysis of photographs of themselves and peers engaged in various classroom activities

Parental Consent is Needed to:
- Video record child-child and teacher-child classroom interactions
- Photograph and display child's picture within the classroom

When and Where:
- All child related activities will occur within the classroom/child care center during the course of the typical school day
- January 2016–August 2016

Compensation:
- Teacher will receive digital camera and printing supplies

*Choosing not to participate or to withdrawing from the will have no effect on your child's enrollment.

Contact Info:
Dionne Sills Busio, M.Ed.
Principle Investigator/ Doctoral Student, UNCG   336.508.8367, dsbusio@uncg.edu

APPENDIX J

MINOR CONSENT FORM

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO
CONSENT FOR A MINOR TO ACT AS A HUMAN PARTICIPANT: LONG FORM

Project Title: The Impact of Pedagogical Documentation on the Individualizing Practices of Early Childhood Educators.

Principal Investigator and Faculty Advisor: Dionne Sills-Busio, M.Ed. (PI) and Dr. Belinda J. Hardin, Ph.D.

Participant's Name: _____

What are some general things you should know about research studies?
Your child is being asked to take part in a research study. Your child's participation in the study is voluntary. You may choose for your child not to join, or you may withdraw your consent for him/her to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. There may not be any direct benefit to your child for being in the research study. There also may be risks to being in research studies. If you choose for your child not to be in the study or you choose for your child to leave the study before it is done, it will not affect your relationship or your child's relationship with the researcher or the University of North Carolina at Greensboro.

Details about this study are discussed in this consent form. It is important that you understand this information so that you can make an informed choice about your child being in this research study.

You will be given a copy of this consent form. If you have any questions about this study at any time, you should ask the researchers named in this consent form. Their contact information is below.

What is the study about?
This is a research project. Your child's participation in this project is voluntary. The purpose of this study is to explore the influence of pedagogical documentation on the individualizing practices of early childhood educators working with children with disabilities. Participants will undergo training in the use of pedagogical documentation, a practice used within the Reggio Emilia approach to early childhood education. Pedagogical documentation is a process in which photographs or other forms of visual

media are used to document child learning. The Reggio Emilia approach is a world renowned approach to early childhood education that emphasizes the use of observation and collaboration to uncover the thinking process of children. Participating teachers will undergo training on pedagogical documentation and then will implement what they learned with students in the classroom whose parents have given permission for them to be in the research study.

Your permission is needed to allow your child to be videotaped and/or photographed by his/her teacher. The videotape and/or photographs will be (a) used by your child's teacher during a training workshop, (b) viewed by the researcher and other teachers participating in the study, and (c) on display in your child's classroom and child care center.

Why are you asking my child?
Your child was selected to participate in this study because he or she is a three or four-year-old child, with or without a disability, enrolled in the class of a teacher who has agreed to participate in this study.

What will you ask my child to do if I agree to let him or her be in the study?
Pedagogical documentation involves the collection of visual, audio, or written documentation of the child's thought processes and interactions as evidenced within the everyday environment of the preschool classroom. The teacher and child then collaboratively analyze the documentation and use the information to develop child centered activities that support the learning style and ability of the child. Further, your child will engage in small group activities with the teacher and up to two classmates, in which they will be asked to analyze and discuss photographs of themselves and their peers engaging in everyday learning activities. The photograph and written notes (defined as an artifact within the pedagogical documentation process) developed during the small group activities will be collected as data for the study. The length of time your child will participate in the study varies. The length of the small group activities for the study will mirror the current length of time allotted within the daily classroom schedule for small group activities. Observations will occur during the course of the typical day and will not require any additional work on the part of your child. In total the amount of time require for your child to participate in the study amount to approximately 10 hours over the course of 9 weeks.

Additionally, if applicable, your permission is needed to allow the researcher to access information regarding your child's learning goals as defined in their individualized education plan (IEP).

If you do not give permission for your child to participate in the study, the researcher will only videotape the teacher during interactions and instruction of participating children. Similarly, any visual or written documentation collected or developed by the teacher will only capture images and information on children whose parents or guardians have given written permission to do so.

Is there any audio/video recording of my child?
Yes, your permission is needed to allow the researcher conducting the study to observe and videotape your child as he or she interacts with his or her teacher and peers participating in the study. Although the participating teacher is the primary focus of the observation, the study does require videotaping the teacher instruct and interact with the children in his or her classroom. The teacher will also photograph your child during the course of the study. Upon completion of the study, participating teachers and families will receive a copy of the photographs and/or video files upon request. Copies of the visual documentation will also be kept in a locked file cabinet in the off ice of Dr. Belinda Hardin (supervising faculty advisor) for a maximun of five years. Because your child's voice will be potentially identifiable by anyone who hears the tape, confidentiality for things said on the tape cannot be guaranteed although the researcher will try to limit access to the tape as described below.

What are the dangers to my child?
The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risk to participants. Throughout the study, the child with interact almost exclusively with their participating teacher and their peers. However, if at any time your child appears distress or uncomfortable during data collect, your child will be free to disengage from the activity. Additionally, your child's teacher will always be present during any data collection to assist your child as needed. If you have questions, want more information or have suggestions, please contact Dionne Sills-Busio (dsbusio@uncg.edu) who may be reached at (336) 508-8367, or Dr. Belinda J. Hardin (bjhardin@uncg.edu). If you have any concerns about your rights, how you are being treated, concerns or complaints about this project, or benefits or risks associated with being in this study, please contact the Office of Research Integrity at UNCG toll-free at (855) 251-2351.

Are there any benefits to society as a result of my child taking part in this research?
By participating in this study, your child will help make a contribution to the field by (a) enhancing understanding of the use of pedagogical documentation to improve instruction to all children, and (b) increase understanding of the influence of personal teaching efficacy on instructional practices of early childhood educators.

Are there any benefits to *my child* as a result of participation in this research study?
The visual documentation may provide you and your child's teacher with a more in depth understanding of your child's development. Additionally, with your permission the documentation will be added to your child's portfolio.

Will my child get paid for being in the study? Will it cost me anything for my kid to be in this study?
Although there is no direct compensation to the children, the child care center will receive educational materials in exchange for participating in this study. Additionally, there are no costs to you for participating in this study.

How will my child's information be kept confidential?
All information obtained in this study is strictly confidential unless disclosure is required by law. Confidentiality for participants will be ensured by assigning identification numbers and removing any/all names associated with the interviews or data prior to data coding and analysis. The master list, in hard copy form, created to link participants to their study ID numbers will be stored in a separate file cabinet located in the office of the principle investigator. Any storage devices containing the digital data will be kept in a locked file cabinet in the office of Dr. Jean Kang. All electronic copies of the data and master list will be stored within a password protected file on the personal computer of the principle investigator. All data will be retained for five years following the completion of the study or until the data have been analyzed and written up for dissemination. At that time, all questionnaire data, permission forms, and project notes will be shredded. Dr. Kang will have access to the personal data on participants and have signed confidentiality agreements. Moreover, any storage devices containing the digital data will be kept in a locked file cabinet in the office of Dr. Jean Kang. In regards to data collected electronically, absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited protections of Internet access. Please be sure to close your browser when finished so no one will be able to see what you have been doing.

What if my child wants to leave the study or I want him/her to leave the study?
You have the right to refuse to allow your child to participate or to withdraw him or her at any time, without penalty. If your child does withdraw, it will not affect you or your child in any way. Choosing not to participate or withdrawing from the study will not affect your relationship or your child's relationship with the child care center from which they were recruited or your child's teacher. If you or your child chooses to withdraw, you may request that any data which has been collected be destroyed unless it is in a de-identifiable state. The investigators also have the right to stop your child's participation at any time. This could be because your child has had an unexpected reaction, has failed to follow instructions, or because the entire study has been stopped.

What about new information/changes in the study?
If significant new information relating to the study becomes available which may relate to your willingness allow your child to continue to participate, this information will be provided to you.

Voluntary Consent by Participant:
By signing this consent form, you are agreeing that you have read it or it has been read to you, you fully understand the contents of this document and consent to your child taking part in this study. All of your questions concerning this study have been answered. By signing this form, you are agreeing that you are the legal parent or guardian of the child who wishes to participate in this study described to you by Dionne Sills-Busio.

_____   Date: _____
Participant's Parent/Legal Guardian's Signature

APPENDIX K

PERMISSION TO VIDEOTAPE

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

CONSENT TO ALLOW VIDEO RECORDING OF A MINOR

Project Title: The Impact of Pedagogical Documentation on the Individualizing Practices of Early Childhood Educators.

Principal Investigator and Faculty Advisor: Dionne Sills-Busio, M.Ed. and Belinda J. Hardin

What is the study about?
The purpose of this research study is to investigate the impact of pedagogical documentation on the individualizing practices of early educators who work with young children with special needs. To understand this better, we plan to observe children's behavior (interactions with teachers, peers, and activities occurring over the course of the typical school day)

What are you asking me to do?
Although your child is not a participant in our study, we will be videotaping participating children in the classroom while they interact with teachers and peers during free play, small and large group activities. Since your child is in class with the participating children in our study, it is possible that could be included in the video recording.

We are asking for your permission to allow us to video record your child as part of our observation of children participating in our study. While your child may be included in the videos, *we will not be observing his/her behavior or using any of their recorded behaviors or information about them as data in our study*.

Are there any risks to my child?
The Institutional Review Board at the University of North Carolina at Greensboro has determined that participation in this study poses minimal risks. All information obtained in this study is strictly confidential unless disclosure is required by law. Confidentiality for participants will be ensured by assigning identification numbers and removing any/all names associated with the interviews or data prior to data coding and analysis. The master list, in hard copy form, created to link participants to their study ID numbers will be stored in a separate file cabinet located in the office of the principle investigator. Any storage devices containing the digital data will be kept in a locked file cabinet in the office of Dr. Belinda Hardin. All electronic copies of the data and master list will be stored within a password protected file on the personal computer of the principle

investigator. All data will be retained for five years following the completion of the study or until the data have been analyzed and written up for dissemination. At that time, all questionnaire data, permission forms, and project notes will be shredded. Dr. Hardin will have access to the personal data on participants and have signed confidentiality agreements. Moreover, any storage devices containing the digital data will be kept in a locked file cabinet in the office of Dr. Belinda Hardin. In regards to data collected electronically, absolute confidentiality of data provided through the Internet cannot be guaranteed due to the limited protections of Internet access. Please be sure to close your browser when finished so no one will be able to see what you have been doing.

If you have any concerns about your child's rights, how they are being treated or if you have questions, want more information or have suggestions, please contact the Office of Research Integrity at UNCG toll-free at (855)-251-2351.

Questions about this project or benefits or risks associated with being in this study can be answered by Dionne Sills Busio, who may be contacted by email dsbusio@uncg.edu , or by phone at 336.508.8367. You may also contact Dr. Belinda Hardin by email, bjhardin@uncg.edu or phone 336. 256-1083.

What if I don't want you to video record my child?
If you do not want your child to be video recorded, simply sign this form and return it to the researchers. If you do so, we will make sure that we do not record your child while observing the participating children in our study. If, however, you are okay with your child being video recorded, you there is no action needed on your part. *You only need to sign and return this form if you do not want your child to be video recorded.*

By signing this form you are indicating that you have read it or it has been read to you, you fully understand the contents of this document, and you **DO NOT** want your child to be video recorded. By signing this form, you are agreeing that you are the legal parent or guardian of the child whom you **DO NOT** want video recorded.

_____   _____

Participant's Parent/Legal Guardian's Signature   Date

APPENDIX L

SURVEY CODING INDEX

Variable	Variable Name	Variable Coding
Age	Age of individual	A number
Gender	Gender of individual	1 - Female 2 – Male
Race	Race of individual	1 = American India and Alaskan Native 2 = Asian 3 = Black, or African American 4 = Native Hawaiian or Pacific Islander 5 = White
Ethnic	Ethnicity of individual	1 = No 2 = Yes
Curpos	Position of person completing survey	1 = Infant/Toddler teacher 2 = Preschool Teacher (3- to 5-year-olds) 3 = Preschool Teacher (3- to 4-year-olds) 4 = Pre-K Teacher 5 = Other
Timepos	Number of months in current position	Number in months ((ex: 12 years = 144)
Timeposcd	Years	1=0 to 5 2=6 to 10 3=11 to 15 4=16 to 20 5=21+
Timeec	Length of time in EC	A number in months
Timeeccd	Length of time in EC coded	1=0 to 5 2=6 to 10 3=11 to 15 4=16 to 20 5=21+

Variable	Variable Name	Variable Coding
Ageran	Age range of students	1 = 2- to 3-year-olds 2 = 3- to 4-year-olds 3 = 3- to 5-year-olds 4 = 4- to 5-year-olds
Typset	Type of setting	1 = Public school 2 = Private school 3 = Private child care program 4 = Head Start 5 = Other
Educat	Highest educational level	1 = Bachelor's degree 2 = Some Master's courses 3 = Master's degree 4 = Some doctoral course
teclice	Possess a teaching license	1 = Yes 2 = No
Typlice	Type of teaching license	1 = Birth- Kindergarten 2 = Kindergarten – 3rd grade 3 = Kindergarten – 5th grade 4 = Middle grades 5 = High School 6 = Other
Specnd	Number of special needs in class	A number
Spenecd	Number of special needs in class coded	1 = 1 to 2 2 = 3 to 4 3 = 5+
Item 14	Curriculum	1 = emergent curriculum 2 = Observation-based curriculum 3 = Reggio Emilia Approach 4 = Creative Curriculum 5 = Inquiry-based 6 = Other

Variable	Variable Name	Variable Coding
Item 15	Rating for item	1 = Never 2 = Less than once a month 3 = Once a month 4 = 2-3 times a month 5 = Once a week 6 = 2-3 times a week 7 = Daily
Item 16	Rating for item	1 = Never 2 = Annually 3 = Semi-Annually 4 = Quarterly 5 = Once a month 6 = 2-3 times monthly 7 = Once a week 8 = 2-3 times a week 9 = Daily
Item 17	Rating for item	1 = Not at all free 2 = Somewhat free 3 = Free
Item 18–19	Rating for item	1 = Never 2 = Less than once a month 3 = Once a month 4 = 2-3 times a month 5 = Once a week 6 = 2-3 times a week 7 = Daily
Item 20–21	Rating for item	1 = Never 2 = Annually 3 = Semi-Annually 4 = Quarterly 5 = Once a month 6 = 2-3 times monthly 7 = Once a week 8 = 2-3 times a week 9 = Daily

Variable	Variable Name	Variable Coding
Item 22	Rating for item	1 = Not familiar 2 = Somewhat familiar 3 = Familiar 4 = Very familiar
Item 23	Rating for item	1 = Not prepared 2 = Minimally prepared 3 = Somewhat prepared 4 = Adequately prepared 5 = Very well prepared
Item 24	Rating for item	1 = Yes 2 = No

INTERVIEW AND FIELD NOTES CODE BOOK

Code			Definition
Primary	**Secondary**	**Tertiary**	
1.0 Existing teaching practices			Any discussion of teaching practices prior to Phase II of study. This includes statements regarding participants' teaching philosophy, instructional, interactions with children, planning, assessment, or DAP practices or use of components of pedagogical documentation prior to completing the modules
2.0 Learning pedagogical documentation			Statements regarding experiences navigating or interacting with materials used to provide instruction on pedagogical documentation and/or to assess understanding of the process
	2.1 Technical issues with module		any statements regarding accessing or navigating the modules or other learning materials
	2.2 Learning content		statements regarding module readings, videos, or other activities required to learn pedagogical documentation
3.0 Using pedagogical documentation			any statements regarding impact on or changes to teaching practice or philosophy participant attributed to use of pedagogical documentation during or after Phase II. Teaching practices include assessments, instruction, planning, individualization, and communication with assistant or families.

Code			Definition
Primary	**Secondary**	**Tertiary**	
	3.1 Positive experiences for teacher or child		statements regarding affect towards using the process
	3.2 Listened to children –		any discussion of changes to amount of time, intensity, or focus on listening to children's words, ideas or contributions
	3.3 Analysis of informal assessments-		participant increased, improved or changed in ways how they viewed or analyzed notes or observations regarding children's play, interactions, or work
	3.4 Developed closer relationship with children		statements regarding changes to interactions with child or understanding of the child's personality, ideas, or interests (not use of child's interests for planning, etc.)
	3.5 More use of open-ended questions		statements on changes in amount or type of questions used during interactions, lessons or activities with children
	3.6 More reflection or insight on teaching practices		- any statements regarding role of pedagogical documentation in facilitating reflection on or evaluation of current practices or identifying needed changes to teaching practices.
	3.7 Procedures align with current teaching practices or philosophy (social validity)-		components fit with current teaching practices or ideas about teaching procedures beneficial to meeting goals important to teacher.

Code			Definition
Primary	**Secondary**	**Tertiary**	
	3.8 Use of process in the future (social validity)		statements regarding intended use of pedagogical documentation, in whole or in part, in the future. Any mention of adopting or continuing use of process or parts of the process into future teaching practices.
	3.9 Impact of observation (Step 1) -		any discussion or statements regarding insight gained on children's social interactions, verbal skills, interests, preferences, or abilities gained during pedagogical documentation observations.
		3.9.1 Observation of child with disability-	any discussion or statements regarding insight gained on child with disabilities' social interactions, verbal skills, interests, preferences, or abilities gained during pedagogical documentation observations
	3.10 Impact of Step 2 interpretation-		any statements regarding insight gained on children's social interactions, thinking, verbal skills, interests, preferences, or abilities gained during individual or collaborative interpretation component of pedagogical documentation. Collaborative interpretation includes revisiting, using photographs or videos and use of open ended questions during activity with child.
		3.10.1 Collaborative interpretation with CWD	any statements regarding insight gained on CWD's social interactions, thinking, verbal skills, interests, preferences, or abilities gained during collaborative interpretation component of pedagogical documentation. Collaborative interpretation includes revisiting, using photographs and open ended questions during activity with child.
		3.10.2 revisiting lead to insight on and	Statements regarding impact of revisiting on early educator's thinking about the child

Code			Definition
Primary	**Secondary**	**Tertiary**	
		changes to early educator's thinking	
	3.11 Impact of implementation (Step 3)		participant increased, improved or changed in some way how they viewed or analyzed notes or observations regarding children's play, interactions, or work as a result of using implementation (Step 3).
		3.11.1. facilitated analysis of teaching practices	any statements regarding reflection on or insight on teaching practice resulting of using Step 3. Implementation (Step 3) entailed review of all information gathered in steps one and two, including review of video recording of collaborative interpretation.
	3.12 Impact of pedagogical documentation on children's behavior-		statements regarding changes in children's behavior during large or small group activities or interactions with teachers or peers.
4.0 Including child with disabilities			Applied insight/information gained from pedagogical documentation to facilitate or increase social interactions or participation of child with disabilities.
5.0 Individualizing for child with disabilities			Applied insight/information gained from pedagogical documentation to alter learning environment to meet needs of CWD or to individualize activities for child with disabilities
6.0 Classroom environment			Any statements on physical classroom environment, such as arrangement of room, amount or state of equipment within classroom, noise level, or lighting.

APPENDIX N

TRAINING GUIDE FOR RESEARCH ASSISTANTS-PEDAGOGICAL DOCUMENTATION

For the purpose of this study open-ended and closed questions are defined as follows:

Closed questions: a question that: a) asks the child to supply a yes or no response, b) requires simple recall of information, or c) managerial questions.

Open-ended questions: a question that: a) requires the child to express and elaborate on his or her thinking, b) a number of different responses would be acceptable, and C) invites longer responses.

<u>**Examples of closed questions**</u>:
- Can you sit still?
- Are you ready to…..?
- What color is the…….? (e.g., shirt, car, toy)
- What month is it?
- What is your full name?

<u>**Examples of open-ended questions**</u>:
- What happens in the spring time?
- What do you think about….?
- What else…?
- What do you want to share about….?
- Can you tell me about….?
- How do you think it works?
- Why?

<u>**Completing the Tally Sheet**</u>
The tally sheet is divided into 3 sections, the heading, the closed question column and the open-ended question column (see sample). Prior to viewing each of the recorded observations, please complete the information located at the top of the tally sheet. Write the name of the recording in the heading of the sheet. Please use the file name as it appears on the memory stick.

As you review the observation, note the time (as indicated by the video counter of the media player) that each open-ended or closed question was asked in the appropriate column.

Criteria for frequency count

Using the provided tally sheet, note the time of occurrence of each open or closed question. Questions that meet the following criteria should be counted:

- Complete questions—Tally each time the teacher asks a complete question. The questions should not be tallied if the teacher is interrupted before stating the entire question. For example, if the teacher states "what is" and does not finish the sentence, it should not be counted in the tally. An example of a completed question is "What can you do with the blocks? However, "what can" should not be tallied/counted.
- Repeated questions—Participants sometime uses slightly different words or emphasis to clarify questions, so each time the teacher repeats a complete question it should be counted.
- Questions to participating children—Tally questions asked by the teacher to the children participating in the recorded activity. Do not tally questions asked by the teacher to other adults in the classroom or to children in other areas of the classroom. For example, if a child approaches the teacher as she is engaging in a small group activity, do not count any questions asked by the teacher during her conversation with that child.
- Verbal questions—To be counted, questioning gestures must be accompanied by a verbal request.
- Fill in the blank questions—Questions in which the teacher leaves out a word should be counted. For example, the statement "Today is_____?" meets the criteria.

Do not count

- Teacher repeats the child's question back to the child for clarification
- Questions asked by the teacher to other adults
- Incomplete questions

File Name:										
Closed questions			Open-ended questions			Visible listening			Use of photography	

APPENDIX O

TRAINING GUIDE FOR RESEARCH ASSISTANTS—INDIVIDUALIZING STRATEGIES

<u>**Completing the Tally Sheet**</u>

The tally sheet is divided into 12 columns representing the targeted individualizing strategies (see below). Prior to viewing each of the recorded observations, please complete the information located at the top of the tally sheet. Write the name of the recording in the *file name* section of the form. Please use the file name as it appears on the memory stick.

As you review the observation, note the time (as indicated by the video counter of the media player) that each individualizing strategy was implemented in the appropriate column.

<u>**Definition of individualizing strategies**</u>

Interactional Strategies	Environmental Strategies
Embedded learning opportunities: The creation of learning opportunities for children with disabilities to practice individual goals and objectives within a typically occurring, meaningful and interesting activity or event in a manner that expands, modifies or adapts the activity/event to facilitate the child's maximum participation (Bricker, Pretti-Fronczak, & McComas, 1998)	**Environmental support**: Refers to adults altering the physical, social, and temporal environment in order to promote the child's participation, engagement, and learning (Horn & Banerjee, 2009)
Human support: Occurs when an adult or peer models a target behavior or skill to the child with disabilities through interactive play, praise or verbal encouragement (Horn et al., 2002)	**Invisible support**: Occurs when adults rearrange aspects of naturally occurring activities to support the child's success in participating (Horn & Banerjee, 2009)
Modeling: Technique in which teacher first completes the task or behavior while child watches students then repeats the assigned task, copying the teacher's methods while working at their own pace (Odom, 2002)	**Material adaptation**: Occur when teachers modify materials so that the child can participate as independently as possible (Horn & Banerjee, 2009).
Mand-Modeling: A strategy in which questions and modeling are used to produce a targeted behavior. The process begins with the teacher observing the child and noting his focus of attention. When the focus of attention is determined and joint attention is established between teacher and child, the teacher provides a mand (a non-yes/no question) and provides a short response interval. If the child responds correctly, the child praises	**Preferences**: Refers to adults identifying child preferences and integrating them into the activity to make it more motivating (Horn & Banerjee, 2009).

Interactional Strategies	Environmental Strategies
the child and terminates the interaction. If the child does not respond correctly, the teacher provides a model, a response interval and consequences as appropriate (Hancock & Kaiser, 1996).	
Prompting: A procedure of providing either an ascending (least to most) or descending (most to least) level of provocation aimed at eliciting target response from child. If the child makes an error or does not produce desired response the next level of provocation is enacted (Neitzel & Wolery, 2009).	**Simplification**: Refers to adults breaking a complicated activity into smaller parts or changing or reducing the steps involved (Horn & Banerjee, 2009).
Time delay: Constant time delay, a variation of progressive time delay, is a response prompting strategy designed to provide and remove prompts in a systematic manner on a time dimension. Constant time delay has two defining characteristics: (a) initial trials involve presentation of the target stimulus followed immediately by delivery of a controlling prompt; and (b) on all subsequent trials, the target stimulus is presented, a response interval of a fixed duration is delivered, the controlling prompt is provided, and a second response interval is delivered as needed (Wolery et al., 1993).	**Special Equipment**: Includes homemade as well as commercially available therapeutic equipment (Horn & Banerjee, 2009).

Important:

In the case of most interactional individualizing strategies, each step of the strategy must be implemented in order for it to be tallied. For example, when implementing modeling, mand-modeling, prompting, and time delay, the teacher should establish joint attention (i.e., maintained eye contact) prior to continuing the process. If this does not occur, the observation should not be tallied.

File Name:											
Interactional						Environmental					
ELO	Human support	Modeling	Mand-modeling	Prompting	Time delay	Environmental support	Invisible support	Material adaptation	Preferences	Simplification	Special Equipment