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## Teachers' Experiences Implementing Evidence-Based Interventions With Fidelity for Preschool-Students With Disabilities

Catherine Patricia Gabbin  
*Walden University*

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# Walden University

College of Education

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Catherine Patricia Gabbin

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Walden University  
2020

Abstract

Teachers' Experiences Implementing Evidence-Based Interventions With Fidelity for

Preschool Students With Disabilities

by

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MEd, Mercy College, 2013

MEd, Brooklyn College, 2010

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

May 2020

## Abstract

Challenging behaviors are common among preschool students with disabilities in educational settings. Evidence-based interventions (EBIs) when implemented with fidelity can be used to support these students. However, many teachers report having limited knowledge of EBIs and are unprepared to use them. The purpose of this exploratory qualitative case study was to observe and interview preschool teachers regarding the methods, procedures, and activities they use to implement EBIs with fidelity for preschool aged students with disabilities in inclusion settings. The conceptual framework was the implementation science framework, which is focused on implementation of EBIs to achieve their intended purpose. A purposeful sampling of 7 general education teachers from preschool inclusion settings in an urban area that includes 2 school districts participated in the study. Data were analyzed using precoding, first cycle coding, and axial coding to determine categories and themes. The key results in this study indicated that general education teachers need professional development training on appropriate use of EBIs with students, teachers need to engage in parent-teacher support/collaborative partnerships, and teachers need to review data regarding students' behaviors that change as a result of EBI implementation. The results were used to provide recommendations for identifying the methods, procedures, and activities needed to improve preschool teachers' implementation of EBIs. This study may contribute to positive social change by supporting general education teachers' efforts to maximize preschool students with disabilities' social-emotional and academic outcomes through the use of EBIs.

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## Dedication

This study is dedicated to my entire family and to my brother Donald, who I miss deeply.

## Acknowledgement

I want to give all the glory to the almighty God that I pray to every day. I am so grateful and blessed for all that you do. Thank you, God, for your faithfulness that is new every day and for your almighty power of love. This has certainly been a challenging and rewarding journey, sometimes a journey of self-reflection and transparency. Thank you to my family who puts a smile on my face and in my heart every day. I love you so much!

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## Chapter 1: Introduction to the Study

The purpose of this study was to examine the gaps in practice related to teachers' implementation of evidence-based interventions (EBIs) with fidelity to improve the behaviors of preschool students with disabilities. EBIs are practices that have peer-reviewed "documented empirical evidence of effectiveness" (National Resource Center for Mental Health and Youth Violence Prevention, 2018, p. 1). EBIs feature a variety of integrated policies, strategies, activities, and services whose effectiveness was supported or informed by research and evaluation (National Resource Center for Mental Health and Youth Violence Prevention, 2018, p.1).

A critical problem related to special education, however, is the poor integration of EBIs. Despite the benefits of EBIs, they are not always implemented with fidelity by teachers (King-Sears, Walker & Barry, 2018; Sanetti & Collier-Meek, 2019). Teachers have reported a lack of preparation and limited knowledge of interventions for supporting children with social and behavioral needs, specifically at the preschool setting. As a result, teachers frequently do not implement EBIs with fidelity, which may contribute to student behavior problems and teacher exasperation (Ross & Sliger, 2015). When an intervention is not utilized by teachers as planned, students' performances can decline (King-Sears et al., 2018, p. 89). EBIs must be implemented with fidelity to provide effective results and, in turn, improve the educational experiences for preschool students with disabilities (Massar, McIntosh, & Mercer, 2017; McIntosh et al., 2017; Swanson, Wanzek, Haring, Ciullo, & McCulley, 2011).

This study was needed to explore general education teachers' comprehensive experiences with implementing EBIs with fidelity to optimize the social and emotional outcomes of preschool students with disabilities within the inclusion setting. Implementing EBIs with fidelity to improve students' behaviors in a preschool setting is not as simple as school leaders asking preschool teachers to try interventions; rather, it involves adopting an implementation science framework related to integrating research-based methods, procedures, and activities needed to promote EBIs being implemented with fidelity (Dunst, Trivette, & Rabab, 2013). Teachers may benefit from the results of this study by gaining more understanding of the issues that are associated with implementing EBIs with fidelity. Ultimately, preschool students with disabilities may benefit from teachers who reflect on EBIs in the classroom. This study has the potential to effect positive social change by supporting teachers to maximize preschool students with disabilities' social-emotional and academic outcomes through EBIs.

In Chapter 1, I present background information on the importance of implementing EBIs with fidelity, define the problem, state the purpose of the study, and present the research questions (RQs) that were aligned with the study. I also provide an overview of the conceptual framework and nature of the study. Additionally, I define several key terms; discuss the assumptions, scope and delimitations, limitations, and significance of the study; and summarize key points.

### **Background**

Many challenging behaviors are common among young children in preschool environments (Jolstead et al., 2017). Hemmeter, Snyder, Fox, and Algina (2016)

postulated that many preschool children require support with their challenging behaviors within the educational environment. Classroom interventions and effective student discipline to promote prosocial skills are essential for teachers to use, especially within the special education setting to yield positive students' outcomes (Ross & Sliger, 2015).

However, general education teachers often have challenges with implementing effective interventions in special education classrooms. Bridging the gap in practice related to EBIs is a constant issue in the field of special education (Brock & Carter, 2017; Cook & Odom, 2013). Practitioners have expressed challenges in implementing EBIs, and researchers are concerned as to the effectiveness of practitioners' abilities to implement EBIs (Brock & Carter, 2017). A critical element in implementation is the fidelity of implementation (Harn, Damico, & Stoolmiller, 2017). Fidelity of implementation is the extent to which treatment/intervention is implemented as planned (Bethune, 2017; Dunst et al., 2013; Harn et al., 2017). Implementing EBIs with fidelity is important because EBIs allow students with disabilities to obtain quality instruction and treatment, resulting in better student outcomes (Schles & Robertson, 2017). Implementing EBIs with fidelity requires research-based methods, procedures, and activities to be integrated to increase the chances for EBIs to be implemented with fidelity.

This study was needed to explore general education teachers' multifaceted experiences with implementing EBIs with fidelity as they related to implementation science, to maximize preschool students with disabilities' educational and social outcomes within their educational settings. For an EBI to be well operationalized, the



core intervention components must be clearly specified and there should be clear procedures in place to ensure successful implementation (Kelly & Perkins, 2012, p. 14). It was important to know what methods, procedures, and activities, if any, were being implemented by general education teachers, as well as the methods, procedures, and activities that were being implemented by the school leaders. The purpose of the study was to gain a deeper understanding of what gaps in practice need to be addressed in research settings to promote and improve the implementation of EBIs. In Chapter 5, I offer recommendations based on the results of this study regarding methods, procedures, and activities that teachers might use to address students' social and behavioral problems. Preschool students with disabilities may benefit from having teachers who can consistently implement EBIs with fidelity.

### **Problem Statement**

A critical problem of special education is the poor implementation of EBIs to address students' behaviors, especially by general education teachers (Brock & Beaman-Diglia, 2018; Stormont, Reinke, & Herman, 2011). Preschool teachers have reported a lack of preparation and limited understanding of interventions for supporting children with social behavioral needs (Brock & Beaman-Diglia, 2018; Reinke, Stormont, Herman, Puri, & Goel, 2011). Preschool general education teachers have expressed that supporting the needs of preschool children with difficult behavior is a challenging aspect of their teacher responsibilities and that professional development is needed to help them implement social and behavioral EBIs (Friedman-Krauss, Raver, Neuspiel, & Kinsel, 2014; Reinke et al., 2011).

Social and behavioral interventions are those interventions that can improve children's social and behavioral outcomes (Stormont, Reinke, Newcomer, Marchese & Lewis, 2015). As a result, there is a gap in practice related to teachers' properly administering EBIs, and this has led to increases in student conduct problems and teacher frustration (Ross & Sliger, 2015). EBIs should be implemented with fidelity in order to maximize students' outcomes (Cutbush, Gibbs, Krieger, Clinton-Sherrod, & Miller, 2017, p. 275). Stormont et al. (2015) posited that the effects of an intervention are achieved by the quality of implementation and the extent to which it is implemented with fidelity. According to implementation science researchers, proper implementation can only occur when there are proper methods, procedures, and activities in place to ensure implementation fidelity (Sanetti & Collier-Meek, 2019). I discuss this concept in more detail in Chapter 2's literature review.

Although teachers are responsible for using EBIs to improve students' academic and behavioral outcomes in classroom settings, implementation fidelity of EBIs is typically low (Cook & Odom, 2013; McKenna, Flower, & Ciulli, 2014; Ross & Sliger, 2015; Stahmer et al., 2015). Without intervention, challenging behaviors in preschool children with disabilities can manifest into more substantial challenges later in life (Jolstead et al., 2017). As a result, Schles and Robertson (2017) reported that "students with disabilities likely make fewer gains than if they received instruction through well-implemented EBIs" (p. 2). Implementing EBIs with fidelity is essential because EBIs allow students with disabilities to acquire quality instruction and treatment, resulting in improved student outcomes (Schles & Robertson, 2017).

Brock and Carter (2017) postulated that teachers need effective training, such as direct training and/or one-to-one coaching (Brock & Beaman-Diglia, 2018), to implement EBIs with fidelity more proficiently, as this can affect students' outcomes. In addition, Fixsen, Blasé, Duda, Naom, and Van Dyke (2010) emphasized that the combination of interventions practices and implementation practices can result in positive effects for children and families and that these behavior supports are consistent with implementation science. I conducted this study to address the gap in practice related to teachers' effective implementation of EBPs with fidelity. The research-based recommendations help close those gaps in practice related to the methods, procedures, and activities that should be used in a preschool inclusion setting to improve the implementation fidelity of EBIs.

### **Purpose of the Study**

The purpose of this exploratory, qualitative case study was to observe and interview general education teachers regarding the methods, procedures, and activities they used to promote and improve the implementation of EBIs with fidelity for preschool students with disabilities. The results from this study helped to identify some of the critical areas of implementation science that were missing in schools for preschool students with disabilities. Using the results, I made recommendations to potentially close the gaps in practice identified in the literature to improve the implementation of EBIs in the research settings. Although the findings and recommendations cannot be generalized to other settings, they may still be useful to other school leaders and teachers facing similar problems with proper EBI implementation.

## **Research Questions**

I developed one primary RQ and two sub-questions to explore the methods, procedures, and activities used by teachers to implement EBIs with fidelity for preschool students with disabilities. It is critical to understand what methods, procedures, and activities are or are not being used by teachers and school leaders to ensure proper implementation of EBIs. This knowledge can be used to identify the gaps in practice related to implementation science so that meaningful recommendations can be provided to teachers and school leaders to improve teaching practice.

RQ 1: What methods, procedures, and activities need to be integrated in the research setting to promote the implementation of EBIs with fidelity for preschool students with disabilities?

Sub-question 1: What are the current methods, procedures, and activities being used in the research setting to promote the implementation of EBIs with fidelity?

Sub-question 2: What are the current methods, procedures, and activities that are not being used in the research setting to promote the implementation of EBIs with fidelity?

## **Conceptual Framework**

The conceptual framework for this study was the implementation science framework based on the research conducted by Dunst et al. (2013). Experts have specifically emphasized the importance of implementing EBIs with fidelity with the special education population (Ross & Sliger, 2015). Dunst et al. noted that evidence-based educational interventions are not being implemented in a manner that yields

intended outcomes. In response, Dunst et al. developed a framework for examining the fidelity of educational interventions. Dunst et al. termed the fidelity of educational and behavioral interventions as *implementation science*. As Duda and Wilson (2015) noted, “implementation science is concerned with fidelity of an education intervention, which means that the intervention must be implemented in the manner it was originally developed, and the contexts within which the interventions (s) will be applied” (p. 3).

Fidelity of an intervention also includes the understanding of the processes, procedures, and conditions which promote or impede that intervention (Kelly & Perkins, 2012). These three factors of the framework, understanding the processes, procedures, and conditions, operationalize the problem, and inform the research questions, data collection, and analysis. The framework operationalizes the problem by having the participants identify and explore components of fidelity of the intervention and guides the data collection and analysis by exploring teachers’ understanding of the process, procedures, and conditions of their behavioral interventions based on the conceptual framework (Kelly & Perkins, 2012).

The implementation science framework focuses on the importance of considering implementation practices, and interventions practices used by the intended adopter of the implementation, as well as those supporting the intended adopter (Dunst et al., 2013). It is important to clarify the distinction between implementation and interventions practices. Implementation practices refer to the “methods, procedures, or activities used to promote adoption and the use of interventions practices” (Dunst et al., 2013, p. 87). In contrast, intervention practices refer to the “methods, procedures, or activities used to promote

improvements in outcomes of interest” (Dunst et al., 2013, p. 87). I used the implementation science framework to inform the research questions and ground the data collection and analysis to identify how to improve the intervention practices of preschool general education teachers to improve the behavior of students. The intended adopters in this study were the preschool teachers and the school leaders who provided the needed support for proper implementation. It is critical to understand what intervention practices (methods, procedures, or activities) were or were not being implemented in the research settings to improve preschool students’ behavior. The scope of this study was to explore general education teachers’ experiences implementing EBIs with fidelity for preschool students with disabilities in inclusion educational environments.

### **Nature of the Study**

The approach of this study was an exploratory case study design. Researchers use case studies to examine a specific aspect of an issue, person, or group of people (Bogdan & Biklen, 2006; Creswell & Creswell, 2018). Participant interviews (see Rumrill, Cook, & Wiley, 2011) served as the main technique for data collection. I used recorded semi-structured interview questions to collect data from the participants that related to their perspectives regarding the methods, procedures, or activities that were or were not being used to improve the implementation of EBIs. I conducted face-to-face, semi-structured interviews with a total of 7 general education preschool teachers in a large Northeastern U.S. city. In the participants’ schools, preschool students with disabilities are provided special education services within general education classrooms (push-in/pull out). The

participants included both novice and experienced general education teachers who teach students with disabilities in preschool classrooms.

I also conducted classroom observations to view and record the research-based methods, procedures, or activities that were or were not being used to improve the implementation of EBIs in the school settings. I documented observations on a researcher created observation protocol form, and this protocol is discussed in more detail in Chapter 3. The specific details related to the data collection were clearly explained in Chapter 3.

I analyzed data collected from participants' interviews and observations using open coding, second coding, and axial coding. I organized and transcribed data into the QSR NVivo software program to establish themes and categories that were related to implementation as well as the framework. Understanding this type of participant data analysis is a common qualitative method (Creswell & Poth, 2018; Ravitch & Carl, 2016). I triangulated data from the interviews and observations to gain a deeper understanding of the methods, procedures, and activities that needed to be integrated into the research setting to promote EBIs being implemented with fidelity for preschool students with disabilities.

I compared and contrasted the interview data that shed light on the methods, procedures, and activities used in the research setting, such as observing teachers' actual practice of applying EBIs in the classroom, as compared to their perceived implementation. I used the observational data to add to the results and to corroborate or contradict what I learned from the interviews so that I may provide research-based

recommendations to close the gaps in practice. Chapter 3 includes a clear description of how these data were analyzed.

### **Definitions**

In this section, I define special terms specific to my study.

*Evidence-Based Interventions*: “Practices or programs that have peer-reviewed, documented empirical evidence of effectiveness. Evidence-based interventions use a continuum of integrated policies, strategies, activities, and services whose effectiveness has been proved or informed by research and evaluation” (National Resource Center for Mental Health Promotion and Youth Violence Prevention, 2018, p. 1).

*Evidence-Based Practices*: “Practices and program shown by high quality research to have meaningful effects on student outcomes. EBP’s must meet prescribe, rigorous standards” (Cook & Cook, 2011, p. 71).

*Fidelity of Implementation*: The “extent to which the core features of a program, intervention, or system are implemented as intended to maximize effectiveness” (Massar et al., 2017, p. 16).

*Inclusive Environment*: Inclusive environments are educational settings in which students with disabilities and atypical students receive instruction from general and special educators who sometimes work collaboratively in the general education classroom (Lastrapes, 2014).

*Push-in Services*: A model in which the general education teacher and the special education teacher work together in a collaborative partnership. The primary focus is to



ensure students with disabilities have access to the general education curriculum within the inclusion setting ( Professional Learning Board, n.d.).

*Pull-out Services:* The provision of individual instruction by the special education itinerant teacher in another setting outside the inclusion setting that is contingent upon the student's educational needs (which includes the student's IEP goals) (Professional Learning Board, n.d.).

*Reinforcement:* "A relationship between two environmental events, a behavior (response) and an event consequence that follows the response" (Alberto & Troutman, 2017, p. 186).

*Positive Reinforcement:* "Reinforcement that occurs when a response follows immediately by the presentation of a stimuli, and as a result, similar responses occur more frequently in the future" (Cooper, Heron, & Howard, 2007, p. 258).

*Special Education Itinerant Teacher (SEIT):* A state certified special education teacher who provides special education services to preschool students with disabilities 3-5 years of age in either home-based and or center-based settings (Dinnebeil & McInerney, 2011).

### **Assumptions**

This study was based on several assumptions. The first assumption was that the in-depth, face-to-face semi-structured interviews would provide me with accurate information to answer the research questions and the purpose of this study. This assumption was necessary for the context of the study because the interview questions were constructed to answer each of the research questions. The second assumption is that

teachers would be honest about their experiences as they related to the methods, procedures, or activities that were or were not being used to ensure proper implementation of EBIs with fidelity for preschool students with disabilities. This assumption was also necessary for the context of the study because it provided important information about whether an intervention was being implemented in the manner as intended. The final assumption is that the classroom observations of all participants would be genuine and not based upon what the teachers think I wanted to see or hear.

### **Scope and Delimitations**

The scope of this study was to explore general education teachers' experiences implementing EBIs with fidelity for preschool students with disabilities in inclusion educational environments. To ascertain teachers' experiences with the methods, procedures, or activities being used or not used and to ensure that EBIs were being implemented with fidelity: interviews and observations were conducted on each participant. The scope of the study was limited to preschool settings located in an urban area within two school districts. As a result, this study was not generalized to other schools. Initially the participants were limited to a purposeful sample of 10 teachers, however only 7 general education teachers volunteered for this study. Qualitative studies use purposeful sampling to identify those who can provide specific data (Creswell, 2015; Schwandt, 2015; Yin, 2016).

Participants included a purposeful sample selection of 7 general education teachers who teach 3-5- years-old students in inclusion settings. Only general education teachers were asked to be participants in this study because they spend the entire school

day with the students, although there is support from a SEIT sometimes during the day. The research settings do not adopt a co-taught inclusion model, but rather one that depends on some support from the SEIT; this also includes consultant support.

### **Limitations**

For my research study I initially selected a purposeful sample of 10 general education teachers who teach preschool students with disabilities in inclusion settings, however only 7 general education teachers volunteered for this study. The sample size of participants may reduce the ability to transfer findings to other teachers or instructional settings (Merriam & Tisdell, 2016). A geographical limitation is that I conducted this study in a specific area of the country where I am not employed in a supervisory capacity.

### **Significance**

The findings from this study was used to provide research-based recommendations to close the gaps in practice related to science implementation practices, specifically the research-based methods, procedures or activities that are needed to improve implementation of EBIs to improve preschool students with disabilities behaviors. When an EBI is not implemented in the manner it should be, it can have an adverse effect on a young child's behavior. As evidenced in the literature by McKenna and Parenti (2017), maintaining a high degree of fidelity or strictly adhering to the core components of a teaching practice or intervention is necessary to maximize student's outcome (p. 332). For example, when implementing an EBI, it is important to ensure that the intervention is implemented with proficiency (Kings-Sears et al., 2018). In other words, it is not just what the teachers are doing in the classroom, but what methods,

procedures and activities that are used to ensure teachers are properly implementing EBIs for preschool students with disabilities. Duda et al. (2015) emphasized that the “conditions for successful implementation of a selected intervention should be clearly articulated to yield positive student outcomes” (p. 16). The results from this study helped to identify the conditions related to methods, procedures, and activities that were or were not being integrated at the research settings to provide meaningful research-based recommendations for improving the fidelity of EBIs.

According to Cutbush et al. (2017), there is a gap in research on the extent to which teachers understand how to implement EBIs with fidelity. Teachers expressed that they have limited knowledge as it pertains to implementing evidence-based interventions for preschool students with disabilities. As a result, this can negatively impact a child’s behavior.

### **Summary**

The purpose of this study was to observe and interview general education teachers regarding the methods, procedures, and activities that were being used or not used to improve fidelity and to ultimately determine what needed to change to ensure proper implementation. EBIs should be implemented with fidelity to produce positive outcomes for preschool students with disabilities. Researchers indicated that teachers have reported a lack of experience and limited knowledge of interventions for supporting preschool students with disabilities with social and behavioral needs. As a result, this can negatively impact on a child’s behavior (Ross & Sliger, 2015). Additionally, for this research study, I conducted face-to-face semi-structured interviews and observations to determine the

methods, procedures, or activities related to properly implementing EBIs with fidelity for preschool students with disabilities in inclusion settings.

In Chapter 2, I examine current literature that focus on the fidelity of implementation, EBIs, and teachers' experiences with the types of interventions used in educational settings for preschool students with disabilities. Further discussion in Chapter 2 focus on the concepts of implementation science and its relation to teachers and their understanding of implementing EBIs.

## Chapter 2: Literature Review

A problem exists with teachers implementing EBIs with fidelity within educational settings for preschool students with disabilities. Pre-school general education teachers have reported a lack of preparation, limited knowledge of interventions for supporting children with social behavioral needs, and difficulties with utilizing EBIs for preschool students with challenging behaviors within the inclusion setting (Brock & Beaman-Diglia, 2018; Reinke et al., 2011; Friedman-Krauss et al., 2014; Reinke et al., 2011). Because of their lack of preparation and knowledge, teachers frequently do not administer EBIs with fidelity, which subsequently can lead to increases in student conduct problems and teacher frustration (Ross & Sliger, 2015). Social and behavioral interventions are those interventions that can improve children's social and behavioral outcomes (Stormont et al., 2015). Although educational researchers have expressed concerns about teachers' implementation of EBIs (Brock & Carter, 2017), there is a gap in the literature related to EBI methods, procedures, and activities and the operationalization of fidelity (Cutbush et al., 2017).

The purpose of this exploratory, qualitative case study was to observe and interview general education teachers regarding the methods, procedures, and activities they used to promote and improve the implementation of EBIs with fidelity for preschool students with disabilities. I used the findings of this study to make recommendations to close the gap in practice related to implementation science practices, specifically the research-based methods, procedures, or activities that are needed to improve implementation of EBIs to improve preschool students' behaviors.

Chapter 2 includes a comprehensive review of current literature relevant to the problem statement and teachers' experiences. Discussion in Chapter 2 includes concise details of implementation science and how it relates to teachers' experiences with implementing EBIs. I begin the chapter with overviews of the literature search strategy and conceptual framework.

### **Literature Search Strategy**

I searched for peer-reviewed journals, books, and government documents from Walden University databases to establish the basis for my research study. I used Google Scholar, ERIC, SAGE Journals, and Thoreau Multi-Database Search to access full-text articles published within the past 5 years. I used the World Wide Web to identify resources relevant to my methodology. Additionally, I explored various types of evidence-based interventions that may be implemented by general education teachers for preschools students with disabilities within inclusion settings. I reviewed the following key words that were relevant to my topic of study: *behavioral interventions, behavioral interventions for children with disabilities, evidence-based interventions, evidence-based practices, implementation of fidelity, implementation science, social skills interventions, positive behavior support, and positive behavioral support interventions*. As I conducted the literature review search, I found a plethora of peer-reviewed articles that focused on the conceptual framework of my study, implementation science, the fidelity of implementation, and other information that pertained to my research topic. I used literature that was beyond five years contingent upon the importance and relevance to my research study.

## Conceptual Framework

A conceptual framework focuses on what is prevalent, the importance of what is to be studied, the data collection methods, the source of data, and the nature of the study site and its participants (Yin, 2016, p. 53). The conceptual framework for this study was the implementation science framework, which is based on the research conducted by Dunst et al. (2013). According to Kelly and Perkins (2012), “implementation science is concerned with an understanding of the processes, procedures and conditions that promote or impede the transfer, adoption, and use of evidence-based interventions in the context of typical everyday settings” (p. 14). A key component in implementation is the concept, fidelity of implementation (Harn et al., 2017). Fidelity of implementation targets the extent to which an EBI is implemented as designed. The implementation science framework focuses on the importance of considering implementation practices and interventions practices used by the intended adopter of the implementation, as well as those supporting the intended adopter (Dunst et al., 2013).

According to Dunst et al. (2013), an implementation science framework contains a key difference between implementation practices and interventions practices (p. 87). Implementation practices encompasses the methods, procedures, or activities used to foster approval and the use of interventions practices (Dunst et al., 2013, p. 87). Intervention practices refer to the methods, procedures, or activities used to encourage improvements in outcomes of interest (Dunst et al., 2013, p. 87).

I used the implementation science framework to inform the RQs and ground the data collection and analysis with a broader goal of identifying strategies to improve the



intervention practices of preschool general education teachers and the subsequent behavior of students. The intended adopters in this study were the preschool teachers and the school leaders who provide the needed support for proper implementation. It was critical to understand what intervention practices (methods, procedures, or activities) were or were not implemented in the research setting to improve the chances of EBIs intended to improve preschool students' behavior being implemented as intended in the research settings. According to Hemmeter et al. (2016), "the effectiveness of an intervention for influencing typical children and children with disabilities challenging behavior requires a competent practitioner who implements an intervention with fidelity" (p. 134). I used the findings from this study to provide research-based recommendations to close the gap in practice related to implementation science practices, specifically the research-based methods, procedures, or activities that are needed to refine implementation of EBIs to improve preschool students' behaviors.

### **Implementation Science**

Implementation science is the "study of the processes and methods involved in the systematic transfer and uptake of evidence-based practices into routine, everyday practice" (Kelly & Perkins, 2012, p. 4). Implementation science is also associated with "research that investigates the best ways to ensure that evidence-based information is integrated into practice" (Olswang & Prelock, 2015, p. 2). According to Dunst et al. (2013), implementation practices differ from intervention practices. Implementation practices encompass the methods, procedures, and activities used to enhance

interventions, and interventions practices pertain to the methods, procedures, or activities used to develop changes (Fixsen, Naoom, Blasé, Friedman & Wallace, 2005).

Implementation science concentrates on the factors that contribute to the gap between research and practice by understanding the treatment context and identifying obstacles to and solutions for the “delivery of sustainable, and effective treatments that will maximize positive outcomes” (Olswang & Prelock, 2015, p. 2). Implementation science research provides a way of linking the research-to-practice gap by improving knowledge about how to adopt and integrate evidence into practice (Olswang & Prelock, 2015, pp. 2-3). As a result, researchers should involve stakeholders to actively assimilate research with “practice goals and needs” (Olswang & Prelock, 2015, pp. 2-3).”

Researchers must understand that many factors will affect implementation success and, in turn, the strategies for addressing these factors need to be methodically examined and measured” (Olswang & Prelock, 2015, pp. 2-3).

### **Literature Review Related to Key Variables and Concepts**

#### **Preschool Students With Disabilities and the Inclusion Setting**

Children with special needs are increasingly being included in regular education settings within the United States (Lee, Yeung, Tracey & Barker, 2015, p. 79). The increase of inclusions has been intensified by its documented benefits whereby students with disabilities in inclusive classrooms can learn, make more progress with academic skills, and develop adaptive behavior in comparison to students educated in specialized schools (Dessementet, Bless, & Morin, 2011; Yildiz, 2015). In early childhood programs, “inclusion refers to the embodiment of children with disabilities together with their

nondisabled peers, having high expectations and intentionally promoting participation in all learning, and social activities facilitated by individualize accommodations, using evidence-based services and supports to foster development (e.g., cognitive, language, physical, behavioral and social-emotional, friendships with peers and a sense of belonging)” (U.S. Department of Health and Human Services, U. S. Department of Education, 2015, p. 3). This applies to every preschool student with disabilities (U.S. Department of Health and Human Services, U. S. Department of Education, 2015). Preschool classrooms refer to an educational environment for young children from three- to five years of age.

### **Evidence-Based Interventions for Preschool Students With Disabilities**

Considerable attention over the past 10 years focused on children’s social-emotional-competence and included the assessment and intervention of social skills that contribute to the elevation of those competencies (Gresham, 2015). The “importance of social-emotional competence is documented by federal legislative efforts to develop these competencies in school” (Gresham, 2015, p. 100). According to Gresham (2015), several “randomized controlled trials (RCTs) have demonstrated the efficacy of social skills interventions in changing peer relations and social competence” (p. 100). In this section, I explored current research related to evidence-based interventions that should be implemented with fidelity in a preschool classroom to improve behavior.

The concept of play is utilized to teach preschools students with disabilities prosocial skills (Vaughn et al., 2003). Components of play used as “in-school interventions with preschool children with disabilities include pretend play, manipulation

of toys, variance of the amount and type of adult interaction during play and play activity packages to enhance social functioning” (Vaughn et al., 2003, p. 3). For young students with disabilities, “most interventions should be used during play and other routine activities (e.g., peer interactions), be embedded into and distributed across activities, and occur when they are contextually relevant” (Horn, Lieber, Li, Sandall, & Schwartz, 2000, p. 209).

Social skills for preschool children with disabilities “are frequently included in intervention packages, with each package containing a combination of various intervention features that are effective in strengthening specific behaviors” (Vaughn et al. 2003, p. 3). The examination of social skills intervention literature revealed that the following features of interventions were frequently used with preschool children with disabilities “prompting of target behaviors, rehearsal of target behaviors, play-related activities, free-play generalization, reinforcement of appropriate behaviors, modeling of specific social skills, storytelling, direct instruction of social skills, and imitation of appropriate behaviors”(Vaughn, 2003, p. 3).

### **Applied Behavior Analysis Interventions**

Reinforcement has been recognized as the main process for increasing target behaviors (Alberto & Troutman, 2017). Reinforcement describes a relationship between “two environmental events, a behavior (response) and an event or consequence that follows the response, which is designed to increase the frequency of that response” (Alberto & Troutman, 2017, p. 186). Vargas (2013), emphasized that the only “environmental change that strengthens behavior is reinforcement” (p. 60). Ross (2015)

identified various overt and subtle forms of reinforcement “which includes, hugs, verbal statements, rewards (e.g., toys or other material items), and special privileges” (p. 36). Subtle forms of reinforcement include calling “attention to the child’s behavior with gestures such as smiling, nodding, and moving into closer proximity to the child” (Ross, 2015, p. 36).

Token reinforcers are symbolic representations that are exchangeable for an item or activity that is significant to the student (Alberto & Troutman, 2017). According to Ross (2015), “a token reinforcement program can subsequently enhance motivation for those students who have not experienced academic and social success” (p. 36). Token reinforcement can also be a great process that can easily “adjust to modifications for individual teacher or classroom”; token programs are effective and have improved student’s compliance, social skills, and academic skills (Ross, 2015, p. 36).

Positive reinforcement occurs “when a response follows immediately by the presentation of a stimuli, and as a result, similar responses occur more frequently in the future” (Cooper, Heron, & Heward, 2007, p. 258). The use of “reinforcements to increase desired behaviors involve consistently rewarding the target child for appropriate behaviors” (Alberto & Troutman, 2017, p. 186 ; Cooper et al., 2007; Prince, 2013; Vaughn et al., 2003; Withey, 2017). A reward serves to motivate the child to show the target behavior frequently (e.g., social reinforcements such as verbal praise, or hugs, are among the most frequently used reinforcers) (Vaughn et al., 2003, p. 4; Ross, 2015). Teachers can encourage desired behaviors and teach preschool children with disabilities to obtain a new skill by reinforcing them (Park & Lynch, 2014, p.37).

According to Cooper et al. (2007), “negative reinforcement is one in which the “occurrence of a response produces the removal, termination, reduction, or postponement of an aversive stimulus or condition which leads to an increase in the future occurrence of that response” (p. 292). Ross (2015), posited that “negative reinforcement also increases target behaviors by avoiding certain unpleasant consequences” (p. 36). Negative reinforcement is not commonly used in classrooms because of practical and potential problems with the maltreatment of the student.

A significant difference between positive and negative reinforcement is based upon the type of stimulus change that occurs following a response (Cooper et al., 2007; Mallot & Shane, 2015). Alberto and Troutman (2015), postulated that “positive and negative reinforcement increases the future probability of the event they follow” (p. 186). An example of negative reinforcement to encourage a young child to put away the blocks is as follow: “You will miss recess time if you do not put away the blocks.” An example of positive reinforcement would be the teacher praises the student for quickly putting away the blocks after play time.

### **Positive Behavior Interventions and Supports**

Within the last two decades, there has been interest in the implementation of the School-Wide Positive Behavior Intervention and Supports (PBIS) (Schuster et al., 2017). This multi-tiered framework involves a” set of interventions practices and organizational systems for establishing the social culture and intensive individual behavior supports needed to achieve academic and social success for all students” (Hansen, 2014; Horner et

al., 2014, p. 197; Holland, Malmberg & Peacock, 2017; Steed, Pomerleau, & Muscott, 2013).

Much growth has occurred within the framework of PBIS and “more specifically, School-wide Positive Behavior Support (SW-PBS), which utilizes tiers of evidence-based interventions to improve school climate, overall discipline, and reduction in the occurrence of problem behaviors in the school settings” (Sailor, Dunlap, Sugai, & Horner, 2009, p. 307). With amendments made to the Individuals with Disabilities Education Act (IDEA) in 1997, “the term most commonly applied to PBS in schools is Positive Behavior Interventions and Support” (PBIS) (Dunlap & Fox, 2015, p.2).

Many troublesome behaviors are common among young children. Without early intervention, “challenging behavior in typical children and preschool children with disabilities can evolve into more substantial concerns later in life and can have a negative effect on the safety and productivity of the learning environment” (Jolstead et al., 2017, p. 48). Teachers need resources to “prevent and to eliminate such behaviors as well as effective interventions for teaching young children social skills that will benefit them” (Jolstead et al., 2017, p.48). Effective interventions should be “developmentally appropriate and must focus on proactively teaching skills rather than simply getting rid of the problematic behavior” (Jolstead et al., 2017 p. 48.). The application of “PBIS practices can increase engagement and strengthen young children’s relationships with teachers and peers” (Jolstead et al., 2017, p. 49). Social skills training, “an important aspect of PBIS, is essential for preschool with disabilities to learn what behaviors are expected, social skills interventions should be taught by defining and modeling specific

steps for expected behaviors before adverse behaviors occur” (Jolstead et al., 2017, p.49). Children learn social skills best when the skills are taught within the context of an activity (i.e., during free play with other peers), and practiced frequently (Jolstead et al., 2017, p.49). Researchers have indicated that the implementation of PBIS in the preschool and elementary school settings “have a significant impact on reducing disruptive behaviors, suspensions, and expulsions, as well as increasing academic performance, and teachers’ self-efficacy” (Reinke, Herman & Stormont, 2013, p. 132).

### **Response to Intervention and the Pyramid Model**

Response to Intervention (RTI) provides an inclusive model for “the prevention of delays in learning” (Fox, Carta, Strain, Dunlap & Hemmeter, 2010, p. 3). Although this model was used primarily for students in grades k-12, extensive research has revealed the importance of incorporating this model into early childhood programs as well (Fox et al., 2010). Response to Intervention “is a systematic decision-making process designed to allow for early and effective responses to children’s learning and behavioral difficulties and provide children with a level of need” (Fox et al., 2010, p. 3). The process has its origin in “applied behavior analysis, precision teaching and diagnostic prescriptive teaching, curriculum-based measurement, preferred intervention, data-measured decision, and team-based solving” (Fox et al., 2010, p. 3).

The Pyramid Model “is a tiered intervention model that guides the design and deliver of evidence-based interventions to promote the social development of young children and provide more intensive interventions for children with disabilities (e.g., social-emotional delays or behavioral challenges)” (Fox et al., 2010, p. 6). An important



aspect of the RTI process is screening and monitoring the progression of young children who have been identified with developmental delays (Fox et al., 2010, p.9; Smith, 2015). The Pyramid Model universal screening is used to identify young children who have social-emotional delays and need more systematic supports or instruction” (Fox et al. 2010, p. 9).

An important feature of RTI is implementation fidelity (Fox et., 2010). The Teaching Pyramid Observation Tool (TPOT) is used to determine the effectiveness of a teacher’s ability to implement intervention practices (Hemmeter, Fox & Snyder, 2008). Although my research study is not measuring or assessing a teacher’s proficiency with implementing evidence-based interventions with fidelity, “a significant feature of the TPOT is that this tool can be used as a way to assess the effectiveness of intervention practices” (Fox et al., 2010, p. 10). The “adoption of the Pyramid Model as an RTI within an early childhood program requires an infrastructure of systems and supports to ensure that practitioners can implement the model with fidelity and that the model becomes fully integrated into the program” (Fox et al., 2010, p. 10). Infrastructure features that support the implementation of an RTI including the following “a) the development of clear procedures, for screening, progress, monitoring, and the delivery of more intensive of intervention to children, b) the development of strategies and systems for family involvement within each tier, c) professional development and ongoing support to teachers for implementation fidelity, d) access to expertise in the design and implementation of tier 2 and 3, and e) procedures for efficient and meaningful data collection and data-based decision making” (Fox et al., 2010, p. 10).

Although RTI is clearly a promising model for prevention and data- based problem solving and although the Pyramid Model addresses the promotion of healthy social-emotional, and the preventions of challenging behavior in a manner that is highly compatible with RTI, there are issues in need of further development and research for the approaches to be implemented easily and effectively in the full array of early childhood programs” (Fox et al., 2010, p. 10-11). Additional research is required to assess issues that relate to the facilitation and the implementation of the model in early childhood programs (Fox et al., 2010, p. 10). There is a literature gap in research as it pertains to factors involving implementing the modeling of RTI in early childhood programs. Specifically, the “development of the model that will benefit greatly from evaluation, correlational and case study investigation focused on systems variable (e.g., administrative practices, polices that contribute to fidelity, sustainability, and procedural aspects of the approach)” (Fox et al., 2010, p. 11).

To support the implementation fidelity of the “Pyramid Model, the use of performance feedback, as part of a Professional Development (PD) approach for practice change has been validated in several preschool intervention studies with promising results” (Hemmeter, Hardy, Schnitz, Adams & Kinder, 2015, p. 145; Snyder et al., 2012). Professional Development can support practitioners to implement the Pyramid Model with fidelity more effectively (Fixsen et al., 2010, p. 145).

### **The State of Implementation Science in Early Care and Education**

Although the history of implementation research in Early Care and Education (ECE) is rather limited, “new research, demonstration, and evaluation studies are

incorporating more elements of implementation science as part of their main activities” (Halle, Metz, & Martinez-Beck, 2013, p.1). A field devoted to the science of implementation has developed in recent years (Halle et al, 2013, p.1). The science of implementation has only recently obtained recognition “in the fields of health, mental health and education, although researchers and practitioners have long acknowledged the importance of comprehending the conditions that affect the delivery of effective programs” (Halle et al, 2013, p.1 ). In recent years growing attention has been given to the “process of implementing programs and practices across a wide range of fields” (Halle et al., 2013 p. 5), There is also an increasing “body of research that demonstrates the prevalence of implementation in improving outcomes for children and families” (Halle et al., 2013, p. 1). Moreover, researchers, practitioners, and policy makers are more cognizant about the significance of implementing evidence-based models in ECE (Halle et al., 2013, p. 1).

As the significance of evidence-based practice (EBP) has extended, “the science of implementation has also acquired attention in health, mental health, education, and related fields” (Halle et al., 2013, p. 5). Currently, there is an increasing body of research that analyzes the implementation process of model programs in the field of ECE (Halle et al., 2013, p. 5).

An evidence-based program that is guided by implementation science for preschool students with disabilities is the School-Wide Positive Support Program (SWPBS); (SWPBS) is a “good example of a program used in special education that includes lessons from implementation science into its strategy” (McIntosh, Filter,

Bennett, Ryan, & Sugai, 2010, p.13). “SWPBS implementation is guided by a model incorporating five principles drawn from implementation science: contextual fit, priority, effectiveness, efficiency, and using data for continuous regeneration “(McIntosh, Horner, & Sugai, 2009, p. 343-344). For example, SWPBS practices are “modified to maximize fit with the environment in which they will be implemented, although modifications are made with strong understanding of SWPBS such that they do not violate the integrity of core components of the intervention” (Cook & Odom, 2013, p.140; Harn, Parisi & Stoolmiller, 2013). SWPBS also has specific methods, procedures, and activities built into it for improved implementation and then ongoing application. In early childhood interventions, “the implementation science framework requires attention not only to the fidelity of the practice but also the fidelity of the methods used to promote the use of the intervention practice” (Dunst et al., 2013, p. 86). For example, specific context should be required; just because something works in 5<sup>th</sup> grade does not mean it will work in preschool.

### **Research-Based Methods, Procedures, and Activities Related to the Fidelity of EBIs**

According to Sanetti and Collier-Meek (2019), implementation is the link between an identified intervention and the desired changes in learner outcomes. The term *implementation* refers to the set of activities and processes involved in putting a defined intervention into place in the function of a context (e.g., preschool students) to change practice patterns (Forman et al., 2013). Within the implementation process there are both intervention activities and implementation activities (Fixsen et al., 2005). Intervention activities include the actions taken to deliver an intervention to a recipient (e.g., preschool

student) in the implementation context (Sanetti & Collier-Meek, 2019). *Implementation activities* refer to the actions taken within the organizational context and related systems to support and complete an appropriate intervention delivery (Sanetti & Collier-Meek, 2019). *Intervention outcomes* are the effects of the intervention on the preschool student with disabilities, *Implementation outcomes* are the effects of deliberate actions taken to implement an intervention; for example, implementation outcomes include improved implementer knowledge and skill development, and changes in the levels of intervention fidelity (Sanetti & Collier-Meek, 2019). *Intervention fidelity* refers to the degree to which the intervention is implemented as prescribed or intended (Sanetti & Collier-Meek, 2019). As such, intervention fidelity is the aspect of implementation that is concerned with whether and how well the intervention got implemented and helped to achieve the intended purpose (Sanetti & Collier-Meek, 2019).

Fidelity means the intervention is employed the way it was originally designed (King-Sears et al., 2018, p. 89). Fidelity should be “determined hand in hand with focusing on evidence-based practices because whether an intervention works as expected can be contingent on whether the intervention was implemented as intended” (King-Sears et al., 2018 p.89). Students can benefit from interventions that are implemented in the manner as intended; however, researchers “discovered that many evidence-based practices and interventions are not used as designed” (Stahmer et al., 2015 p.4).

When an intervention is not used as designed, a student’s performance can be affected; interventions should be “supplemented by a fidelity plan that supports teachers’ implementation, which in turn impacts on students with or without disabilities” (Stahmer

et al., 2015, p. 4). In this study, implementation fidelity refers to how well an EBI got implemented to preschool students with disabilities (Sanetti & Collier-Meek, 2019).

Fidelity is primarily about implementing intervention procedures in a precise manner (Harn, Parisi, & Stoolmiller, 2013). According to King-Sears et al. (2018), “some teachers may not realize the connection between high fidelity and desired impact on students’ outcomes” (p. 90). Students outcomes are decreased when fidelity is low. King-Sears et al. (2018), postulated that when fidelity is low, it does not always mean that it is the intervention that should change but rather how the interventions are implemented” (p. 90). Teachers need understanding about what an intervention is, what it looks like, how to use it, and how to guarantee implementation as planned (King-Sears et al., 2018). Kelly and Perkins (2012), emphasized that for an evidence-based intervention to be well operationalized, the core intervention components must be clearly specified (p.14).

### **Components of Fidelity**

Fidelity of implementation is the extent to which treatment/intervention is implemented as planned (Bethune, 2017; Dunst et al., 2013; Harn et al., 2017; Hemmeter et al., 2016). The importance of fidelity has been established in many fields, such as classroom management (Gagnon & Bumpus, 2016). Fidelity is also an important consideration in special education. For example, significant levels of fidelity are associated with improved student response to intervention (McKenna & Parenti, 2017). Fidelity to structure and fidelity to processes are two essential considerations for school-based practitioners. “Fidelity to structure refers to the degree to which teachers adhere to the core components of an intervention or instructional practice” (McKenna & Parenti,

2017, p. 331). Researchers indicated that a failure to adhere to the core component of an intervention consistently may adversely affect the effectiveness and that teachers frequently experience this difficulty (Sanetti, Collier-Meek, Long, Byron & Kratochwill, 2015).

Fidelity to process, or the quality of instruction, can also influence student outcomes. When providing instruction, teachers may closely follow interventions or instructional procedures but not effectively implement individual components (Piastra, Justice, McGinty, Mashburn & Slocum, 2015). Providing instruction that has significant levels of fidelity to structure and process are imperative as full implementation of an intervention is considered essential to positive student outcomes (Brock & Beaman-Diglia, 2018; Piastra et al., 2015).

Intervention fidelity refers to the degree to which the intervention was implemented as prescribed or intended. Intervention fidelity is the “aspect of implementation that is concerned with whether and how well the intervention got implemented” (Sanetti & Collier-Meek, 2019, p. 6). There are three dimensions that are well agreed upon across these models and have been shown to improve data-based decision making. The first is “related to intervention content and is commonly referred to as *adherence*, that is those intervention (e.g., EBIs) components that were implemented as planned, the second is related, to *quality* that is, how well intervention components were implemented, and the third is related to quantity, and is commonly referred to as *exposure*, that is the amount of intervention implemented as planned” (Sanetti & Collier-Meek, 2019, p. 7).

Essential characteristics of fidelity include the application of intervention practices and implementation practices (Dunst et al., 2013). Professional development training is needed to support teachers to effectively apply evidence-based interventions for preschool students with disabilities (Trivette & Dunst, 2011). In this study, implementation fidelity refers to preschool teachers' implementation of EBIs to address the behaviors of preschool students with disabilities. The specific methods, procedures and activities that are still needed to be integrated to achieve a high level of fidelity were explored.

### **Training and Professional Development for Teachers**

To provide instruction or intervention with fidelity, teachers may require ongoing support in the form of coaching, and performance feedback that is supplemental to professional development. Several strategies have been identified that enable practitioners to implement evidence-based interventions with fidelity. Brock and Carter (2017), emphasized that proficient training is required that permits preservice, and in-service teachers, to effectively implement evidence-based interventions to enhance outcomes for students with disabilities.

According to Brock and Beaman-Diglia (2018) a one-to-one coaching plan is an effective avenue for improving fidelity (p.33). One-to-one coaching encompasses the educator who is going to be implementing the intervention and another school staff member who serves as a coach (e.g., lead special education teacher)" (Fallon & Kurtz, 2018, p. 298). A coach offers training and support to ensure that the intervention is delivered with significant levels of implementation fidelity (Collier-Meek, Sanetti, &



Boyle, 2016). In a review of the coaching literature, “12 studies were identified in which coaching effectively promoted implementation fidelity of evidence practices” (Brock & Beaman-Diglia, 2018, p. 33.). Second, “modeling either in person or via video, can enable practitioners to acquire implementation fidelity” (Brock & Beaman-Diglia, 2018, p. 33).

Performance feedback involves” observing the practitioner, collecting data related performance, and then sharing this data with the practitioner to improve future implementation” (Brock & Beaman-Diglia, 2018, p. 33; Darling-Hammond, Hyler & Gardner, 2017). Performance feedback is a widely researched implementation support strategy (Sanetti & Collier-Meek, 2019). The effectiveness of performance feedback has been evaluated across individual and small group, and class-wide interventions to support learners with and without disabilities, and with implementers such as general education teachers and special education teachers (Fallon et al., 2015). Results of systematic reviews and meta-analyses, wherein multiple studies are evaluated together to identify effectiveness, indicated that performance feedback consistently improves implementers’ intervention fidelity (Fallon et al., 2015).

Performance feedback is based on behavioral theory and entails providing praise and positive feedback for steps that are consistently implemented (Sanetti & Collier-Meek, 2019, p. 184). This praise is thought to increase the likelihood that the implementer will continue to deliver these intervention steps consistently in the future (Sanetti & Collier-Meek, 2019). Performance feedback also “includes discussion, reminders, and practice of intervention steps that have not been consistently

implemented; this process provides an opportunity for the implementer to relearn the intervention steps, to answer questions, to collaboratively problem-solve how to deliver these steps, while also providing accountability for delivering these steps consistently” (Sanetti & Collier-Meek, 2019, p. 184). This process ensures that the implementer is prepared for implementation and knows that the fidelity coach will follow up on the fidelity of the intervention (Sanetti & Collier-Meek, 2019, p. 185).

Bethune and Wood (2017) recommended that “side-by-side coaching to train teachers to implement function-based interventions based on PBIS can also improve the accuracy of implementation of a PBIS intervention” (p. 132). Researchers indicated that “performance -based feedback/coaching with teachers that includes direct training procedures involving modeling, rehearsal, and feedback lead to higher intervention fidelity” (Conroy, Sutherland, Vo, Carr & Ogston, 2014, p. 81; Fettig & Artman-Meeker, 2016). Additionally, the use of “performance feedback, as part of a Professional Development (PD) approach for practice change has been validated in several preschool intervention studies with promising results” (Hemmeter et al., 2015, p. 145; Snyder al., 2012).

Direct training, also referred as *behavioral skills training*, “is provided before the intervention is delivered to support teachers in developing and practicing the skills needed to implement the intervention” (Fallon, Sanetti, Chafouleas, Fagella-Luby & Briesch, 2018, p. 197). Fallon and Kurtz (2018), emphasized that the “intervention should be delineated into a list of discrete steps” (p. 3). “Once these steps are identified, direct training is structured to provide the opportunity to describe and demonstrate each step

before the teacher engages in practice and is provided specific feedback related to the performance the steps” (Fallon & Kurtz, 2018, p. 298). For example, the teacher is provided with support how to implement each intervention step (Fallon & Kurtz, 2018). The “steps are subsequently explained in the context of an implementation process, and teachers should gain an understanding of how the intervention is intended to affect student outcomes” (Fallon & Kurtz, 2018, p. 300). “Once the teacher learns about the intervention steps, it is important to model the intervention process by demonstrating each step; once the intervention is described and modeled for the teacher; it is time to practice the steps of the intervention” (Fallon & Kurtz, 2018, p. 300).

Sanetti and Collier-Meek (2019), postulated that the overall purpose of direct training is to prepare the implementer to deliver the intervention with fidelity by teaching the implementer foundational interventions knowledge and skills (p. 101). During direct training, implementers will be provided with didactic training on intervention steps, demonstration of the intervention, provide the implementer the opportunity to practice the intervention first with guidance and then independently, and provide positive yet corrective feedback (Sanetti & Collier-Meek, 2019, p. 101). After direct training, the implementer will have an increased understanding of the intervention, a positive experience of delivering the intervention steps, and more optimistic expectations about intervention effectiveness and the feasibility of delivering the intervention with fidelity (Sanetti & Collier-Meek, 2019, p. 102). When provided during intervention implementation, direct training is well suited to address skill-based deficits (e.g., low levels of intervention fidelity due to a lack of skill) because of its focus on modeling and

practicing; direct training can involve a review of the whole intervention, or it can target the intervention steps that the implementer is not delivering consistently (Sanetti & Collier-Meek, 2019, p. 103).

Direct training has been evaluated in the research literature as an independent implementation support and as a component of consultation and coaching (Sanetti & Collier-Meek, 2019). It has been “consistently demonstrated to be an effective, proactive strategy that can increase the intervention fidelity of teachers implementing academic and behavioral interventions” (Sanetti & Collier-Meek, 2019, p. 102).

According to King-Sears et al. (2018), to ensure and support teachers in implementing an intervention with fidelity, someone who has expertise about the intervention should be designated to serve in the role as a fidelity coach; “this person could be a fellow teacher, who has expertise about the intervention, an administrator familiar with the methods, or a special educator” (p. 90). In this capacity “a fidelity coach is not an evaluator, or in a specific position, other than having expertise as to how the intervention should be implemented” (King-Sears et al., 2018, p. 90).

King-Sears et al. (2018) emphasized that “teachers need clear parameters about what an intervention is, what it looks like, how to use it, and how to ensure implementation as intended” (p. 90). King-Sears et al. (2018) developed a five step-process that can be used to support a teacher to implement an evidence-based intervention. “Regardless of who the fidelity coach or what the intervention is, there are best practices each coach uses when preparing other teachers to use the corresponding intervention” (King-Sears et al., 2018, p. 90). A “protocol identifies the procedures of the

intervention, specific or special materials used with the intervention, and how often steps and materials are used” (King-Sears et al., 2018, p.92). The five-step-process focuses on how the fidelity coach can work with teachers for high fidelity includes “ a) model the intervention, b) share the intervention’s protocol, c) coach the practitioner prior to implementation, d) observe the fidelity during implementation, and e) reflect with practitioner” (King-Sears, 2018 p. 92-95).

Frequently low fidelity may indicate that some steps of the intervention are being omitted, which comprises the effectiveness of the intervention; examine which steps are being overlooked and discuss why” (King-Sears et al., p. 95). If low fidelity continues, the implementer should repeat the step1 process again by modeling the intervention” (King-Sears et al., p. 95). These steps are very specific methods, procedures, and activities to increase the chance for high fidelity of EBIs.

Stopping after step 1 is insufficient because the components of an intervention are “not a pickup and choose process; that is, there are not parts of the interventions that can be eliminated once what constitutes fidelity of treatment is established in the corresponding protocol” (King-Sears et al., 2018, p. 91). Every five steps address important parts of the “intervention fidelity” (King-Sears et al., 2018, p. 91). Following the “five-step fidelity process can increase the probability that teachers have a clear understanding of the intervention and how to use it; clarification is the first step toward achieving high fidelity” (King-Sears et al., p. 91-92). According to Fixsen et al. (2005), “implementation is defined as a specified set of activities designed to put into practice an activity or program known dimensions” (p.5).

Fixsen et al. (2005), posited that “descriptions of interventions, such as the activities or programs, need to be specific with clear details so that independent observer can detect the presence and strength of the specific set of activities” (p. 5). The specific, clear details for the “activity or program are described when the teacher is preparing and then the five steps begins” (King-Sears, 2018, p. 92). Experience in practice, as well as a wealth of research, repeatedly demonstrates that in the absence of implementation support, most implementers struggle to deliver interventions as intended (Sanetti & Collier-Meek, 2019, pp. 7-8). The results of this study helped to identify what implementation supports are still needed for preschool teachers to implement EBIs with a high level of fidelity.

### **Summary and Conclusions**

The importance of implementing evidence-based interventions with fidelity for preschool students with disabilities was discussed in Chapter 2. In my literature review I discussed the importance of inclusion for preschool students with disabilities, various types of social skills/interventions and evidence-based interventions/programs, research-based-methods, procedures, and activities related to the fidelity of EBI’s that are essential for supporting preschool children with disabilities in inclusion settings. Additionally, I discussed Implementation Science, The State of Implementation Science in Early Care and Education, and professional development/training for teachers.

Fidelity of implementation “means the intervention is used the way it was originally designed” (King-Sears et al., 2018, p. 89). A student’s progress is contingent upon the way in which an intervention is implemented (King-Sears et al., 2018). Fidelity

is also an important consideration in special education. For example, significant levels of fidelity are associated with improved student response to intervention (McKenna & Parenti, 2017).

What is known as it relates to the topic of this study is that although teachers have reported a lack of preparation and limited understanding of interventions for supporting children with social-emotional behavioral needs, researchers have indicated that ongoing training and professional development are necessary to support teachers in identifying the types of evidence-based interventions to use, and how to implement these interventions with fidelity for preschool students with disabilities. What is not known and needs to be studied as it relates to the topic of this study, is the extent to which some “evidence-based interventions may work differently in various situations and find a balance between adaptation and implementation with high fidelity” (Harn et al., 2017, p. 190). Although it is assumed that evidence-based practices implemented with significant fidelity will result in improved outcomes, whereas low fidelity will lead substandard outcomes, there is controversy, (no widespread agreement among researchers) as to what level of fidelity optimizes outcomes (Harn et al., 2017, p. 181).

This study addressed the gap in the literature by increasing the understanding and knowledge of the research-based methods, procedures, and activities that are related to the implementation and fidelity of EBIs. To provide instruction or interventions with fidelity, teachers require ongoing support in the form of coaching, performance feedback (Brock & Beaman-Diglia, 2018; Sanetti & Collier-Meek, 2019), and direct training (Fallon & Kurtz, 2018; Sanetti & Collier-Meek, 2019). The components of Chapter 3

included a description of the research methodology and rationale used to explore teachers' experiences implementing evidence-based interventions with fidelity. I added in this chapter my role as a researcher, participant selection, data analysis plan, and ethical procedures.



### Chapter 3: Research Method

The purpose of this exploratory, qualitative case study was to observe and interview general education teachers regarding the methods, procedures, and activities they used to promote and improve the implementation of EBIs with fidelity for preschool students with disabilities. I used face-to-face, semi structured interviews, and direct observations to determine the gaps in practice related to the implementation of EBIs for preschool students with disabilities within the inclusion setting.

In Chapter 3, I discuss the role of the researcher and describe the research design and methodology that I used to explore general education teachers' experiences implementing EBIs with fidelity. I include the RQs I sought to answer as part of my qualitative study. Additional information within Chapter 3 addresses procedures for recruitment, participation, and data collection and the data analysis plan. The concepts of trustworthiness and ethical procedures are elucidated in this chapter as well.

#### **Research Design and Rationale**

The RQs focused on teachers' overall experiences implementing EBIs with fidelity, as they related to implementation science. It is important to comprehend what methods, procedures, and activities are being used by teachers and school leaders to find gaps in practice to make informed changes that can lead to the proper implementation of EBIs for preschool students with disabilities.

RQ 1: What methods, procedures, and activities need to be integrated in the research settings to promote the implementation of EBIs with fidelity for preschool students with disabilities?

Sub-question 1: What are the current methods, procedures, and activities being used in the research setting to promote the implementation of EBIs with fidelity?

Sub-question 2: What are the current methods, procedures, and activities that are not being used in the research setting to promote the implementation of EBIs with fidelity?

The central purpose of this study was to explore general education teachers' experiences with implementing EBIs with fidelity for preschool students with disabilities as they relate to implementation science. I conducted a qualitative exploratory case study to answer the research questions. Qualitative researchers focus on the perspectives of people who are directly affected by the phenomena being investigated (see Rumrill et al., 2011). Data collections for qualitative research consisted of procedures such as in-depth interviews and direct observations that enabled me to obtain rich and thick descriptions of the meaning that research participants attributed to their experiences (see Rumrill et al., 2011). I opted against using a quantitative study approach because it would have entailed using numbers to represent data and analyzing the results using statistical techniques (Merriam & Tisdell, 2016), both of which I considered inappropriate for my research. Consistent with a qualitative approach, I focused on interactions and observations and words and pictures to communicate what I learned (Merriam & Tisdell, 2016, p. 17).

I considered but opted against using the qualitative research designs of ethnography, grounded theory, and phenomenology. Although researchers use both case study and ethnography to investigate a bounded unit, ethnography differs from a case study in that it requires long-term immersion in a cultural group in order to collect data

(Burkholder et al., 2016); because this particular study did not focus on a specific cultural group this research design was not chosen. The purpose of the grounded theory design is to build a substantive theory about the phenomenon of interest (Corbin & Strauss, 2015; Merriam, 2009, p. 23). This study was not focused on developing and/or substantiating any theories. Therefore, this research design was not selected. I also did not select a phenomenological research design because this type of approach focuses on understanding the lived experiences of a set of individuals who share a common experience (Burkholder et al., 2016, p. 70). For example, in a study of “principals’ experience of the applicability of their training programs to the real-life work of educational leadership, the researcher would interview a number of individuals from multiple locations, rather than in a bounded unit, such as in a case study or cultural group (ethnography)” (Burkholder et al., 2016, p. 70). I selected a qualitative, exploratory case study design because case study designs are forms of inquiry that afford significant interaction with research participants (Bloomberg & Volpe, 2016). Exploratory case study designs also provide an in-depth picture of the unit of study and an analysis of the data for themes, patterns, and issues (Bloomberg & Volpe, 2016, p. 46). Qualitative research is an exploratory investigation of a complex social phenomenon conducted in a natural setting through observation, description, and thematic analysis of participants’ behaviors and perspectives for the purpose of explaining and/or understanding the phenomenon (Burkholder et al., 2016, p. 70).

### **Role of the Researcher**

In the role of the researcher, I was a listener, interviewer, observer, and writer (see Rumrill et al., 2011, p. 154). In addition to these skills, I interacted directly with my data sources (i.e., participants). I was cognizant of my own experiences and personal characteristics that may have influenced or biased the interpretation of the results (see Rumrill et al., 2011). I was also responsible for stating any biases when reporting research results (Rurmill et al., 2011). A method to achieve this is researcher reflexivity (Ravitch & Carl, 2016, p. 188). Reflexivity requires researchers to document in field notes, memos, or journals their self-critical analysis of biases, their role in and responses to the research process, and any adjustment made to the study based upon ongoing analysis (Burkholder et al., 2016). Reflexivity in qualitative research required me to maintain an openness in critically examining my subjectivity that may have influenced my research. I kept a reflexivity journal in which I wrote memos, noting potential biases and assumptions (see Koch, Niesz, & McCarthy, 2014). By documenting my experiences, I reflected on my influences, perceptions, and background knowledge (Kovach, 2018).

Currently, I am employed by an early childhood agency within a large Northeastern U.S. city in the capacity as a SEIT. I travel to various center-based and home-based settings and provide special education services to preschool students with disabilities who are 3-5 years old. I interviewed and observed 7 general education teachers. Before conducting any interviews, I obtained written consent to conduct and audio-record the interview, informed participants of the purpose and procedures of the interview, and informed participants that at any time during the interview, the individual

had the right to withdraw from the study (see Brinkmann & Kvale, 2018). Most importantly, during the interview, I ensured that the participant comprehended what was asked and clarified anything that was not understood by the participant. I also conducted direct observations as a nonparticipant observer and recorded descriptive in-depth field notes (see Creswell & Poth, 2018; Patton, 2015). Observations and field notes allow the researcher to see and record first-hand the activities in which research participants are engaged, and observations are frequently used as a method of triangulation (Ravitch & Carl, 2016). I remained objective and refrained from expressing any of my personal beliefs and/or opinions and focused on what I observed.

## **Methodology**

### **Participant Selection**

Participants in this case study were 7 general education teachers who teach 3-5-years-old preschool students with disabilities within inclusion settings from two different research settings and two different school districts. I interviewed and observed 5 participants from Research Setting 1 and 2 participants from Research Setting 2. Participants included novice teachers (two years or less of teaching) and experienced teachers (three years or more of teaching). I selected participants based upon a purposeful sample. In purposeful sampling, the researcher intentionally selects individuals and sites to suit the purpose of the investigation (Creswell, 2015; Patton, 2015). Only general education teachers were asked to be participants in this study because they spend the entire day with the students, although there is support from a SEIT sometimes during the

day. The research settings do not adopt a co-taught inclusion model, but rather one that depends on some support from the SEIT, this also includes consultant support.

Upon receiving conditional approval from Walden University's Institutional Review Board (IRB) 09-17-19-0125985, I contacted the director from Research Setting 1 and then the director from Research Setting 2 and obtained written permission to conduct a dissertation research study in a large Northeastern U.S. city. When written permission was obtained to conduct research from both directors, I forwarded this information to Walden University's IRB. Upon approval from IRB to collect data for my research study, I began the identification, contact, and recruitment process of participants. I obtained the work e-mails of general education teachers who teach 3-5-years-old preschool students with disabilities in inclusion settings from both directors. I notified participants in an e-mail, for initial recruitment with an informed consent form (see Brown, 2018). The information in the informed consent form included the purpose of the study, clarified the participants' role in the study, the risks, benefits of being in the study, the confidentiality of their participation, and stipulated that participants were under no obligation to participate (Brown, 2018). The participants replied to the confidential e-mail on the informed consent form using their e-mail (Brown, 2018). I reviewed participants' responses and checked for any returned " I Consent" within the informed consent form. A copy of all e-mails are stored on the hard drive of my password protected computer in a folder.

I contacted participants who returned the signed informed consent form via an e-mail to request primary contact information, this information included the participant's e-

mail address, and telephone numbers (Brown, 2018). I contacted participants via e-mail to schedule and confirm a date, time, and location to conduct face-to-face semi-structured interviews for 45-60 minutes, and direct classroom observations for 60 minutes. My contact information, as the researcher, was included within the informed consent form, as well as the contact information of my committee chair (Maxwell, 2013). If for some reason, I was not able to find enough participants for the research study, I conversed with the dissertation committee for other possible alternatives, such as noting the study limitations of participation or possibly reopening the identification of potential participants.

### **Instrumentation**

I conducted individual face-to-face semi-structured interviews during the non-instructional time and classroom observations that helped me to answer the research questions in my study (Creswell, 2015). Each interview was conducted at a time and location that was convenient and comfortable for the participant and the direct observations were conducted during a participant's instructional time within the classroom environment. During all interviews, I audio-recorded (with permission of each participant) questions and responses from the participant. According to Creswell (2015), this will provide me with an accurate account of the interview. During the actual interview, I used an interview protocol to guide the data collection (see Appendix A). This protocol form was developed based upon the research questions, the conceptual framework, research-based methods, procedures, and activities related to the fidelity of EBIs. An interview protocol form was also used to include "instructions for the processes

of the interview, the questions to be asked, and space to take notes of responses from participants” (Creswell, 2015, p. 224). To strengthen the validity of my study, I had the dissertation committee and a peer reviewer who completed a qualitative dissertation and obtained a Doctor of Education in 2018, read the interview protocol form for clarity and purpose before I used the interview protocol.

I conducted one observation of each participant, for a total of 7 observations. Classroom observations of each participant lasted 60 minutes. Observations can provide a researcher with opportunities to “record information as events occur in a setting, study actual behaviors, and study individuals” (Creswell, 2015, p. 211). As a nonparticipant observer, I used a researcher created observation protocol form to record field notes of my observations (see Appendix B). The observation protocol form was developed based on the research questions, conceptual framework, research-based methods, procedures, and activities related to the fidelity of EBIs. To increase the validity of the observation, I had the dissertation committee, and a peer reviewer who completed a qualitative dissertation and obtained a Doctor of Education in 2018, read the observation protocol form for clarity and purpose before I used the observation protocol. I prepared timely field notes that were thick and rich in the narrative description after the observation (Creswell & Poth, 2018, p. 168).

### **Procedures for Recruitment, Participation, and Data Collection**

My goal was to recruit 10 teachers, however only 7 participants responded and volunteered for this study. Upon receiving conditional approval from Walden University’s IRB (approval number 09-17-19-0125985), I contacted the director from



Research Setting 1 and then the director from Research Setting 2 and obtained written permission to conduct a dissertation research study in a large Northeastern U.S. city. When written permission was obtained to conduct research from both directors, I forwarded this information to Walden University's IRB. Upon approval from IRB to collect data for my research study, I began the identification, contact, and recruitment process of participants. I obtained the work e-mails of general education teachers who teach 3-5 years- old preschool students with disabilities in inclusion settings from both directors. I e-mailed participants an informed consent form. The information in the informed consent form clarified the participant's role in the study, and that participants were not under any obligation to participate (Brown, 2018). I also explained the purpose of the study, the risks, benefits of being in the study, and the confidentiality of their participation. Participants were asked to respond to the informed consent form within 10 days. Participants who agreed to participate in the study were asked to reply to the informed consent form with the words " I Consent" within 10 days (Brown, 2018).

I conducted interviews in a location that was convenient and comfortable for the participant. I talked about the purpose of the interview, reminded the participant that their responses were held in strict confidence, that the interview would be audio-recorded, and I asked the participant if they had any questions before the interview began (Brinkmann & Kvale, 2018, p. 62). Interviews lasted from 45-60 minutes. I conducted a debriefing before ending all interviews. I asked participants, for example, if they had anything else to say, and or discussed some prevalent aspects of the interview (Brinkmann & Kvale, 2018). I recorded the interview data by taking notes during the interview. Interviews were

recorded utilizing an iPad voice memo recorder because an audio recording provides a more accurate interpretation of the interview (Yin, 2018). I acknowledged each interviewee by thanking them for their participation in the interview.

Participants were observed within their classrooms during a regularly scheduled instructional time with students for approximately 60 minutes. During the single observation of the participant, I used a researcher created observational protocol form (see Appendix B) to record field notes during classroom observations. After observing designated participants, I thanked each participant.

### **Data Analysis Plan**

The analysis of “qualitative data requires an understanding of how to make sense of text and images so that you can form answers to your research questions” (Creswell, 2015, p. 235). The research questions developed for this study provided a focus for the data collection and helped me develop the interview questions. By using the research questions as a framework to guide the interview questions, a connection was made between the conceptual framework, data that was collected, and the research questions (see Kovach, 2018).

The purpose of this exploratory qualitative case study was to observe and interview general education teachers regarding the research-based methods, procedures, and activities that were being used or not used to promote and improve the implementation of EBIs with fidelity for preschool students with disabilities. I used semi-structured interviews and direct observations to determine the gaps in practice as this related to the implementation of EBIs for preschool students with disabilities within the

inclusion setting. I also examined the methods, procedures, and activities used or not used to identify the gaps in practice related to implementation science so that meaningful recommendations could be provided to the teachers and school leaders that could lead to closing the gaps in practice.

The initial step in the analysis was to explore the data. Maxwell (2013), recommended that listening to the interview audio file before transcription is also an opportunity for analysis (p.105). This analysis included reading the interview transcripts, observational field notes, written memos in the margins, and listening to the interview recordings several times (Creswell, 2015; Maxwell, 2013). As I read the data, I wrote notes and memos on what I heard or saw in my data and then transcribed the data in a micro soft word document. I then established a priori codes based upon the conceptual framework, components of fidelity (e.g., *fidelity to structure*, *fidelity to process*, research and interview questions, and observations to develop ideas about categories and relationships) (Maxwell, 2013).

The next step in qualitative analysis was to code the data. Corbin and Strauss (2015), recommended that after collecting data, transcribing interviews, and organizing the qualitative data, the researcher should begin the data analysis with open coding (p. 78). The goal of open coding was to identify common terms and phrases (see Corbin & Strauss, 2015). Open coding results are a set of categories derived from themes substantiated by the data collected (Burkholder et al., 2016). I coded the data, and then established themes based on participants' responses (see Rubin & Rubin, 2012). Coding also encompasses "segmenting and labeling text to form descriptions and broad themes in

the data” (Creswell, 2015, p. 242). I used QSR NVivo software to identify emerging themes. QSR NVivo software helps researchers to transcribe, organize, store, and retrieve data utilized in their research studies (QSR International Pty Ltd, n.d.). I used the QSR NVivo software to transcribe the audio-recordings from the interviews. I looked for themes that aligned with the interview questions, research questions, and observations that were guided by the research questions. I then used axial coding to determine if there were “relationships among the data, and then organized the data into themes and subsequent categories” (Burkholder et al., 2016, p. 79). Axial coding refines the categories created in open coding by combining several categories into one, subdividing one category into several or creating a new category (Burkholder et al., 2016, p. 79).

More specifically, I began the analysis of my data by precoding. According to Ravitch and Carl (2016), precoding is a process of reading, questioning, and engaging in my data (e.g., the interview transcripts) before formally beginning the process of coding the data (p. 243). This coding process included circling, color coding with markers or highlighters, and or underlining key words or phrases that stood out and writing notes or questions in the margins (Ravitch & Carl, 2019, p. 243). In the first cycle of coding, I searched for commonalities, and differences among the data (e.g., words and phrases that were used frequently). I used axial coding to see how these codes came together into categories, and then subsequent themes using the QSR NVivo program (Ravitch & Carl, 2016). This process contributed to an understanding of the research-based methods, procedures, and activities related to the fidelity of EBIs that were used or not. Additionally, I analyzed data and looked for themes as they pertained to the methods,

procedures, and activities that were used or not to identify the gaps in practice as they related to implementation science.

During the data analysis phase, I conducted a member check. “Member checking allows the participant to help ensure the accuracy of the identified themes that emerged from the interview” (Burkholder et al., 2016, p. 81). The “checking allows the participants to correct or otherwise improve the accuracy of the study, and at the same time, reinforce collaborative relationships” (Yin, 2016, p. 333). According to Ravitch and Carl (2016), “member checking is a process in which the researcher checks in with the participant (s) in a study to assess and or challenge the researcher’s interpretations and the accuracy of the researcher’s analysis” (p. 196).

Member checks confirmed the validity and accuracy of the themes that I identified. Creswell (2014), described member checking as an important component of qualitative research methods by “taking the final report or specific descriptions or themes back to the participants and determining whether these participants feel that they are accurate” (p. 25). Participants also notified me if there was any incorrect interpretation of data. I sent each participant a copy of my draft findings for review of my interpretation of their data. Participants were instructed to review their draft for accuracies and notify me within 10 days if any changes were needed.

According to Maxwell (2013), “identifying and analyzing discrepant data is a significant part of validity testing in qualitative research” (p. 127). When “discrepant data is in doubt, the basic principle is that I should rigorously examine both the supporting and

the discrepant data to assess whether it is more feasible to retain or modify the conclusion” (Maxwell, 2013, p. 127). All discrepant data were noted in the findings.

### **Issues of Trustworthiness**

In qualitative research, credibility is directly related to research design and the researcher’s instruments and data. I adhered to Walden University’s policy by completing a Human Subjects Protection Training completion course. This course provided me with information regarding the ethical standards that I used for the study. Qualitative researchers attempt to establish credibility by implementing strategies of triangulation, member checking, presenting thick descriptions, and discussing negative cases (Ravitch & Carl, 2016, p. 187).

I employed triangulation, which entailed using multiple sources of data and checking them against one another (Merriam & Tisdell, 2016). I triangulated data from the interviews and observations to gain a deeper understanding of the methods, procedures, and activities that needed to integrate into the research settings. I determined the similarities and differences between what the participant stated in their separate interviews and what the participant did in the classroom during their observation as it related to the methods, procedures or activities that the teacher used or did not use when implementing an EBI with fidelity for preschool students with disabilities.

I stopped analyzing data when I reached saturation. Saturation occurs when continued data analysis does not add new themes or patterns but reinforces what has been already established in the data analysis (Burkholder et al., 2016, p. 74). Transferability is how qualitative studies ”can be applicable, or transferable to a broader context while still

maintaining context-specific richness” (Ravitch & Carl, 2016, p.188). Methods for achieving transferability includes having detailed descriptions of the data as well as each context in this case so that readers and researchers can make comparisons to other contexts based on as much information as possible (Ravitch & Carl, 2016). This allows the audiences of the research to “transfer aspects of a study design and findings by taking into considerations different contextual factors instead of attempting to replicate the design and findings” (Ravitch & Carl, 2016, p. 186).

### **Discrepant Cases**

According to Ravitch and Carl (2016), the researcher should code their “data to develop themes and then refine and revise these themes” (p. 262). It is important to scrutinize themes by checking and rechecking their interpretations against the data as well as looking for alternative explanations and possible misinterpretations (Ravitch & Carl, 2016). This involves looking for cases that do not fit a pattern or their current understanding of the data (Ravitch & Carl, 2016, p. 262). Maxwell (2013), indicated that “identifying and analyzing discrepant data and negative cases is a significant part of the logic of validity testing in qualitative research” (p. 127). “The basic principle here is that the I should rigorously examine both the supporting and the discrepant data to assess whether it is possible to keep or modify conclusions” (Maxwell, 2013, p. 127). In instances when there is discrepant evidence, readers should review the information and then draw their assumptions (Wolcott, 1990).

Qualitative research studies are considered dependable by being consistent and stable over time (Ravitch & Carl, 2016). Dependability is a similar construct to reliability

in quantitative methods (Ravitch & Carl, 2016). The researcher's data should answer the research questions. Methods for achieving dependability are member checking, the triangulation, and sequencing of methods and creating a well-articulated rationale for these choices to confirm that the researcher has created the appropriate data collection plan given the research questions (Ravitch & Carl, 2016, p. 188).

Dependability entails "that you have a reasonable argument for how you are collecting the data, and the data is consistent with the argument" (Ravitch & Carl, 2016, p. 188). This entails using appropriate methods and making an argument for why the methods I used are appropriate to answer the concepts of my study (Ravitch & Carl, 2016). Dependability means the instruments used to collect data produce consistent results across data collection occurrences (Burkholder et al., 2016). Dependability means that there is evidence of consistency in data collection, analysis, and reporting; it also means that any adjustments or shifts in methodology, are documented and explained in a "fashion that is publicly accessible" (Burkholder et al., 2016, p.75).

Confirmability requires that other informed researchers arrive at essentially the same conclusion when examining the same qualitative data (Burkholder et al., 2016). The goal of confirmability is entirely "to acknowledge and explore the ways their biases and prejudices map onto their interpretation of data and to mediate possible through structured reflexivity processes" (Ravitch & Carl, 2016, p. 188). Methods to achieve confirmability include implementing triangulation strategies, researcher reflexivity, and external audits (Ravitch & Carl, 2016, p. 188). Reflexivity requires the researcher to document in field notes, memos, or journals, their self-critical analysis of biases, their



role in and responses to the research process, and any adjustments made to the study based upon ongoing analysis (Burkholder et al., 2016). Reflexivity in qualitative research required me to maintain an openness in critically examining my subjectivity that may influence my research. I kept a reflexivity journal writing memos, noting potential biases, and assumptions (see Koch et al., 2014). By documenting my experiences, I reflected on my influences, perceptions, and background knowledge (see Kovach, 2018). These measures helped with the confirmability of my study. I also used a peer reviewer. According to Merriam and Tisdell (2016), a peer reviewer can be either a “colleague familiar with the research or one new to the topic” (p. 249). Additionally, the role of the peer reviewer is to pose questions that assisted me in clarifying conclusions and excising my biases (Burkholder, Cox & Crawford, 2016, p. 76). The peer reviewer for this study was someone who completed a qualitative dissertation and obtained a Doctor of Education in 2018.

### **Ethical Procedures**

As a researcher, I obtained formal approval from Walden University IRB to conduct the research study with participants. I also obtained permission from both directors from Research Setting 1 and Research Setting 2 to conduct the research study. I informed participants the purpose of the study, the nature of the study, that their participation was voluntary, and that at any time they could withdraw from the research study. I protected the privacy of all participants and maintained the confidentiality of collected data by assigning participants numbers (Yin, 2018).

If a participant refused to participate or withdrew from the study, I selected the next participant that expressed interest. I adhered to the same procedures for notification and scheduling (Kovach, 2018). Data was stored in a secure folder on my password protected computer (Kovach, 2018). Data will be destroyed after five years, upon the completion of the study. All electronic data will be removed and deleted from the computer and hard copies of data will be shredded. I ensured that all communication with participants was sent via confidential emails. I was the only one who had access to the data in this study.

### **Summary**

In Chapter 3, I discussed the role of the researcher, methodology used for the research study, participant selection, the data instruments that were used throughout the study, procedures for recruitment, participation, data collection, data analysis plan, trustworthiness, and ethical procedures. My research method was a qualitative exploratory case study that focused on teachers' experiences implementing evidence-based-interventions with fidelity for preschool students with disabilities, and the methods, procedures, and activities that were being used or not used to improve fidelity and to determine what was done to ensure proper implementation. I discussed the protocol for beginning and applying the ethical procedures associated with the research study. In Chapter 4, I discuss the data analysis and provide the results of the study.

## Chapter 4: Results

The purpose of this exploratory, qualitative case study was to interview and observe general education teachers regarding the methods, procedures, and activities they used to promote and improve the implementation of evidence-based interventions with fidelity for preschool students with disabilities within inclusion settings. I wanted to obtain a more comprehensive understanding of what gaps in practice needed to be addressed in the research settings to promote and improve the implementation of EBIs. In the previous chapters I discussed the background of the study and the conceptual framework which was grounded on the implementation science framework (Dunst et al., 2013).

In the literature review, I examined the current literature on the fidelity of implementation, EBIs, and teachers' experiences with the types of interventions utilized in educational settings for preschool students with disabilities. I also discussed several professional development strategies that were identified that enabled practitioners to implement EBIs with fidelity. The literature supports that professional development, parent support/collaboration, and a data review of students' behaviors are essential in order for the general education teacher to improve and plan appropriate activities/instruction. Although this topic was not discussed within the literature review, the importance of parent involvement has been documented in research as a contributing factor to a child's success. Parent-teachers partnerships have shown to be an effective method of involving parents in the education of their children, and the benefits are well documented (Laster, 2016). Researchers emphasize the importance of using data for

making instructional improvements. The review of data can lead to improvements in educational processes and increased student achievement. This knowledge is also necessary to determine what EBIs, if any, should be implemented to support preschool students with disabilities in the inclusion setting (Prenger & Schildkamp, 2018, p. 735. Brock and Carter (2017), posited that proficient training is required that permits preservice, and in-service teachers, to effectively implement evidence-based interventions to enhance outcomes for students with disabilities,

In this chapter, I discuss both research settings (Research Setting 1 and Research Setting 2) and elaborate on the participants' demographics and characteristics related to the study. I discuss the location, frequency, and duration of the data collection for each instrument, describe how the data were collected, and present any variations in data collection from the plan presented in Chapter 3. In addition, I discuss the process used in data analysis, present the results for each RQ, and provide evidence of trustworthiness. In this study an exploratory, qualitative case study was used to answer the following questions:

RQ1: What methods, procedures, and activities need to be integrated into the research setting to promote the implementation of the EBIs with fidelity for preschool students with disabilities.

Sub-question 1: What are the current methods, procedures, and activities being used in the research setting to promote the implementation of EBIs with fidelity?

Sub-question 2: What are the current methods, procedures, and activities that are not being used in the research setting to promote the implementation of EBIs with fidelity?

### **Setting**

All general education teachers who were interviewed and observed for this study had varying levels of teaching experiences and currently teach in preschool inclusion settings for 3-5-years old preschool students with disabilities. Both schools were located in a large urban Northeastern city within the United States. In Research Setting 1, two of the teacher participants were newly assigned to teach in inclusion settings. Another teacher taught for more than 16 years, with 7 of those years in inclusion classrooms. The next teacher taught for more than 3 years. The last teacher who volunteered for this study was in her second year of teaching in inclusion settings. In Research Setting 2, one of the teacher participants had 14 years of teaching, and the other teacher has more than 3 years of teaching preschool students with disabilities in inclusion settings. Pseudonyms were used to protect the identity and the rights of all participants. All interviews were conducted on a date and at a location and time that was convenient and comfortable for each participant. Some of the participants who volunteered for this study I knew professionally. I was cognizant of my own experiences and personal characteristics that may have influenced or biased the interpretation of the results (see Rumrill et al., 2011).

I was also responsible for stating any biases when reporting research results (Rumrill et al., 2011). A method to achieve this is researcher reflexivity (Ravitch & Carl, 2016, p. 188). Reflexivity requires researchers to document in field notes, memos, or

journals their self-critical analysis of biases, their role in and responses to the research process, and any adjustment made to the study based upon ongoing analysis (Burkholder et al., 2016). Reflexivity in qualitative research required me to maintain an openness in critically examining my subjectivity that may have influenced my research. I kept a reflexivity journal in which I wrote memos, noting potential biases and assumptions (see Koch, Niesz, & McCarthy, 2014). By documenting my experiences, I reflected on my influences, perceptions, and background knowledge (Kovach, 2018).

### **Data Collection**

On September 17, 2019, Walden University IRB approved my application for my research study (approval number 09-17-19-0125985). The final sample for the research study was seven participants. After obtaining IRB approval, I began the recruitment process of participants in the first research study site. I obtained work e-mail addresses of general education teachers who taught 3-5 years -old preschool students with disabilities in inclusion settings. I notified each participant in an e-mail of the study and provided an informed consent form. I e-mailed 12 informed consent forms to general education teachers. I sent follow-up e-mails to participants who did not initially respond. However only five participants responded from the first research setting. I received permission from the IRB to obtain additional participants and to conduct my research study at another early childhood setting. Two general education teachers from Research Setting 2 volunteered to participate in this research study.

I provided each participant with a letter of informed consent form which included the purpose of the study, and clarified the participant's role in the study, the risks, and

benefits of the study, and the confidentiality of each participant. Each participant was also provided in an e-mail the Interview Protocol Question Form (see Appendix A). I reviewed participants' responses and checked for any returned "I Consent" within the consent form. I contacted each participant who returned the signed informed consent form via e-mail to request primary contact information and to schedule and confirm a date, time, and location to conduct a face-to-face, semi structured interview for 45-60 minutes and a direct classroom observation during instructional time for 60 minutes. I used a researcher-created interview protocol form (see Appendix A) to record interview responses. I conducted interviews on a date, and at a location, and time that was convenient, and comfortable for each participant. I did observations during each participant's instructional time within their classroom and at a time of their choice. I used a researcher-created observational protocol form (see Appendix B) to record field notes during each classroom observation.

Each interview took approximately 35-45 minutes. The time difference was contingent upon the extent to which the participant responded to each interview question. Although all participants responded to each interview question, some participants elaborated less.

### **Variations in Data Collection**

There were two variations in my data collection from my data plan delineated within Chapter 3. The first variation was that I found it necessary to conduct my research study within two different early childhood settings. The next variation was that a teacher participant requested not to be audio-recorded during the interview. I was granted

authorization from my committee chair to conduct the interview without audio recording the participant. I manually transcribed the participant's interview responses. There were no other unusual circumstances that occurred during the data collection.

## **Data Analysis**

### **Interviews**

I started data analysis when I completed the data collection. All interviews were recorded using an iPad voice memo recorder. All participants' audio-recorded files were uploaded to NVivo transcription and identified by a participant number and the date of the interview, this occurred within 24 hours of each interview. I repeatedly listened to each audio-recorded interview to ensure that the transcription of each interview was verbatim. I exported each interview transcription from NVivo as a password-protected Microsoft Word document to my personal computer. I began my data analysis by precoding, reading, questioning, and engaging in each interview transcript before formally beginning the process of coding the data (see Ravitch & Carl, 2016). This process included color coding with highlighters and underlining key words or phrases that stood out. For example, upon reading Participant's 1 transcript, I underlined words and phrases that were aligned with activities that promoted positive reinforcements (inductive).

I then generated codes within NVivo utilizing a priori, open coding, and axial coding processes. In open coding, I searched for commonalities and differences among the data, for example, words and phrases that were used frequently (Corbin & Strauss, 2015). According to Corbin and Strauss (2015) in open coding the goal is to look for



common themes that have emerged and then what kinds of categories emerged from their organization. A theme is what is first recognized as a commonality across participants; a category is the label the researcher gives to the theme (Burkholder et al., p. 79). Open coding results are a set of categories derived from themes substantiated by the collected data (Burkholder et al., 2016). I used axial coding to determine if there were relationships among the data, and then organized the data into themes and subsequent categories (Burkholder et al., 2016, p. 79). For example, one of the emergent themes generated from the data collected was professional development for general education teachers within the inclusion setting, the child nodes (categories) that were created from this theme (parent node) was: a-coaching, b-specific disabilities c- role-playing, and d-communicate with preschool students with disabilities. I uploaded this data to NVivo. Each uploaded document was considered a file in the NVivo program (QSR International Pty Ltd (n.d.).

Each node contained a reference that supported that node. All reflexive notes were saved under the memo section of the NVivo program and were linked to each designated participant (QSR International Pty Ltd (n.d.). This process contributed to an understanding of the research-based methods, procedures and activities related to the fidelity of EBIs that were or were not used. Additionally, I analyzed data and looked for themes, sub-themes and categories as they pertained to the methods, procedures and activities that were used or not used to identify the gaps in practice as they related to implementation science. Once the data was collected and then analyzed, I emailed each participant a copy of my draft findings and themes for review of my interpretation of

their data. Participants were instructed to review their draft for accuracies and notify me if any changes were needed.

### **Observations**

I used a researcher created single page observation protocol form (see Appendix B) as a data collection tool to record participants' observations. All handwritten observational field notes were typed within the same day or no later than 24 hours.

I conducted classroom observations as a non-participant observer. Sub-question 1 and sub-question 2 was used to focus on what are the current methods, procedures, and activities that were used or not used in the research setting to promote the implementation of EBIs with fidelity? I analyzed the observational field notes using the methods of open, and axial coding. These themes and codes included *modeling -verbal prompts, visual prompts and physical prompts, evidence-based interventions, positive reinforcement, negative reinforcement, redirection, transitions, communication with preschool students with disabilities, and scaffolding*. I uploaded each observation protocol form as a file within NVivo.

I triangulated data from the interviews and observations to gain a deeper understanding of the methods, procedures, and activities that need to be integrated into the research setting to promote EBIs being implemented with fidelity for preschool students with disabilities. I compared and contrasted the interview data that shed light on the methods, procedures, and activities used in the research setting, such as observing teachers' actual practice of applying EBIs in the classroom, as compared to their perceived implementation. I used the observational data to add to the results and to

corroborate or contradict what I learned from the interviews so that I may provide comprehensive research-based recommendations to close the gaps in practice.

According to Ravitch and Carl (2016), the researcher should code their “data to develop themes and then refine and revise these themes” (p. 262). It is important to scrutinize themes by checking and rechecking your interpretations against the data as well as looking for alternative explanations and possible misinterpretations (Ravitch & Carl, 2016). Throughout this study there were no discrepant cases to report therefore they were not factored into the analysis of this research study. The coding and themes process continued until saturation.

## **Results**

### **Interviews**

**Research Question 1.** Participants’ semi-structured interviews from Research Setting 1 and Research Setting 2 were conducted to address research question 1: What methods, procedures and activities need to be integrated in the research setting to promote the implementation of EBIs with fidelity for preschool students with disabilities?

Based on the data collected and analyzed from participants’ interviews, the following emerging themes, sub-themes and categories emerged, a) ***Parent support/collaboration***. Some general education teachers from Research Setting 1 indicated that they only involve a parent (s) when their child’s behavior becomes uncontrollable within the educational classroom and or if their child has harmed another child. Participant 2 stated, “ If a student was ever acting with poor behavior to an extent that it was harming another child or disrupting the classroom entirely then I would

definitely think it's important to involve the parent." Participant 4 expressed, "I often try not to involve parents too much, I don't like to use, I will call mom, or I will tell dad, I think that the students should behave in an autonomous way in that they're choosing to behave in a certain way, not just feel threatened to behave that way." Parent-teacher partnerships have shown to be an effective method of involving parents in the education of their children, and the benefits are well documented (Lasater, 2016). b) ***Data review of students' behaviors.*** Many general education teachers from research setting one expressed that they do not review data of student's behaviors. Participant 1 noted, "We don't review data with each other." Participant 2 expressed, "The other teacher and I we definitely at the end of the day will discuss different student's behaviors, and how their day went in comparison to other days, but we haven't really talked about any data specifically." Participant 3 stated, "Converse with other teachers to obtain strategies as needed to implement in the classroom for the student, share information." Participant 4 reported, "There are other teachers in the other classrooms who have been here for much longer than I and have been very helpful for giving me advice, different strategies to manage certain students." When asked, Participant 5 responded, "No" However Participant 7, from research setting two noted the following, "Yes, we review data, whenever we do any type of special data collection, either assessment or behavior, yes, we review with the director." Participant 6 from Research Setting 2 added "Sometimes we don't know where a behavior is coming from, so sometimes we use a ABC (Antecedent Behavior Consequences) chart to find out what happened before, and then what happened when she was having a tantrum, so that we can decide if there's a pattern

of that behavior. Researchers emphasize the importance of using data for making instructional improvements; this can lead to improvements in educational processes and increased student achievement (Prenger & Schildkamp, 2018, p. 735). c) ***Professional development training***. Participant 1 from Research Setting 1 noted, “ I have received training working with children with special needs, but it’s very broad; it’s not like kids on the spectrum, or kids with ADHD.” d) ***Teachers perceived barriers***. Participant 1 reported that a perceived barrier was ” I think the barriers we face is we don’t always have the exact time or even manpower to put our efforts into one child.” Participant 2 expressed, “ I think that probably the biggest struggle in dealing with behavioral problems is having to take care of and ensure that the other children are having an engaging experience at school.” Participant 6 reported that a perceived barrier is that some parents might not agree with some of the things you’re implementing, ”but you as an educator have to educate the parents and talk to them about what will work with your child as well.”

**Sub-question 1.** Participants’ semi-structured interviews from Research Setting 1 and Research Setting 2 were conducted and analyzed to address sub-question 1: What are the current methods, procedures, and activities being used in the research setting to promote the implementation of EBIs with fidelity?

Table 1 lists the nodes that were generated to determine emerging themes, subthemes, and categories from sub-question 1.

Table 1

| <u>Themes/Subtheme/Categories</u> |                              |                                    |                          |   |
|-----------------------------------|------------------------------|------------------------------------|--------------------------|---|
| Support Systems                   | Evidence-based interventions | Data Review of students' behaviors | Professional development | Communication with preschool students with disabilities |
| <u>Categories</u>                 |                              |                                    |                          |   |
| Administrative support            | Modeling                     |                                    | Coaching                 |   |
| Teacher support/collaboration     | Positive reinforcement       |                                    | Specific disabilities    |   |
| Parent support/collaboration      | Negative reinforcement       |                                    | Role-playing             |   |
|                                   | Redirection                  |                                    | Transitions              |   |
|                                   | Different strategies         |                                    |                          |   |

*Support systems.* The first node generated for this theme within NVivo was **administrative support**. Participant 1 expressed, “I would talk to my coordinator or bosses and see if we can get more assistance in the classroom, because we have more than one student behaving a certain way and it is going to disrupt the other kids”. Participant 1 also noted, “ I have received training on like what I mentioned, like working with children with special needs, but it’s very broad, it’s not like kids on the spectrum, for kids maybe with ADHD, is very broad.” Participant 3 stated, “ We have a team meeting once per month with teachers in the classroom with the family worker and director, If we have any concerns, we speak to them and the family worker will speak to the parent and see if we would come up with a plan that works at school and home.”

Participant 4 expressed, “ Through my teaching certification program I had 10 weeks of training this summer, we had specific lesson plans catered towards engaging student behavior and classroom management.” Participant 5 stated, “ We have people come in that helps me with children with challenging behaviors, and children that face trauma in their lives, talking to them and helping them face their past and find different ways to help them become a happy child.” The second node generated for this theme was **teacher support/collaboration**. Participant 1 expressed, “ We have two teachers in the classroom, so if one needs help, we’ll work together.” Participant 2 stated, “ Often times I would prefer to deal with the behavioral issue one-on-one with me and the student, but other times, there’s chaos in the classroom so the other teacher or teachers would help also in dealing with the behavioral problem.” Participant 3 stated, “ We work as a team, teachers back each other up, we try to be on the same page, if teachers do not agree we speak among ourselves.” Participant 5 expressed, “ I address the behavior on my own and most of my students they respect me, and they know the rules or if I tell them what to do, they will listen to me instead of the other teachers.” The final node generated for this theme was **parent support/collaboration**. Participant 1 expressed, “I do involve my parents if it’s a concern, I will pull them to the side and we will talk maybe during pick up or during drop off and what is also important, I like to include them in the positive as well, just not the negatives and I think that helps build a better relationship.” Participant 2 stated, “ If a student was ever acting with poor behavior to an extent that it was harming another child or disrupting the classroom entirely then I would definitely think it’s important to involve the parent.” Participant 3 noted “ During parent teachers conferences

or if the parent is picking up the child or dropping off the child, teachers will take a few minutes to speak to the parent as needed.” Participant 4 stated, “ I often try not to involve parents too much, I don’t like to use, I will call mom, or I will tell dad, I think that the students should behave in an autonomous way in that they’re choosing to behave in a certain way, not just feel threatened to behave that way.” Participant 6 expressed, “ We talk to the parents almost on a daily basis, we share strategies that we use in the classroom and tell the parents, anything that they use at home and it is working, let me know so we can incorporate the strategy in the classroom.” Participant 7 stated, “ We’ll have conversations usually by phone, email or in person and we share strategies that we do in the classroom and they’ll provide whatever strategy they’re doing at home, we try to combine the two.”

***Evidence-based interventions.*** All participants reported utilizing some type of evidence-based intervention for a preschool student with a disability within the inclusion classroom. The first node generated for this theme within NVivo was **modeling**. Participants reported that modeling was used to encourage students to follow classroom rules and prosocial behaviors. Participant 1 stated, “ I go over the classroom rules during circle and throughout the day, when I see students who are following the rules, I say for instance, look at J (pseudonym), look how we sit in circle, this is what I say, so that other kids want to follow good behaviors and the good role models of the classroom.” Participant 2 stated, “ So I guess showing them the right way to do things many times so that they see, and they can do what they’re seeing as opposed to always saying like you don’t do this, you don’t do this.” Participant 3 stated, “ I had to do a lot of modeling and



encourage him to taste other foods, and now he is able to eat different types of food on his own, he can now use a fork and spoon”. Participant 4 expressed, “One of my students has language needs, so if she needs something she screams and does not use her words, and I’ll have one of the students say it for her so that she can repeat it after them”. The second node generated from this theme was **positive reinforcement**. Most participants mentioned using positive reinforcement to increase desired behaviors. Participant 1 stated, “ If I want to implement for instance stickers at the end of the day, I will use the behavior throughout the day to either give the stickers or not and explain why, that has helped believe or not and it definitely help kids who are having trouble following the schedule or following the rules in the classroom.” Participant 3 stated, “ I address why are you doing this, you know you are not supposed to do this so show me what are we supposed to do and when they show me the correct behavior, I give them a hug, high-five or a smile.” The next node that was generated from this theme was **negative reinforcement**. Participant 1 stated, “ I have to see how they react like for instance if giving a sticker doesn’t matter, I’ll just try to take something else maybe a little bit away that they like so that they can understand that what they did earlier throwing themselves on the floor was wrong.” The next node that was generated for this theme was **redirection**. Participant 6 noted, “ If a child is running, we say, lets jump up four or five times in one place.” Participant 7 indicated, “ Once the child starts fidgeting at circle time during a large group instruction, or becomes disruptive to the whole group, he can have an option, work one-on-one with one of the staff, while listening to the conversation, and at the same time keeping his hands occupied.” The next node that was

generated from this theme was **different strategies**. Participant 4 exclaimed, “ I do different things, for example a student of mine has language development needs, for her you need a lot of visuals in the classroom, so anything that has a word also has a picture next to it, and for the students who have social emotional development needs, we cater to them by talking through a lot of issues, or emphasize many to use words when discussing our feelings.” Participant 2 stated, “ So if we are doing an activity and a few students are not demonstrating good behavior a lot of times I’ll do a reset, so the whole class will stand up and shake out their body and then sit down and start over fresh.” Participant 3 stated, “ I have one child that is very hyper, does not stay still at all, and that kind of disrupts the classroom, so what I have him doing now is helping me with the notebooks .” Participant 7 expressed, “ Based on what I have learned in school and the workshops that are offered here, we use a certain strategy for different types of behavior, if it is attention seeing, we make sure we give attention, but not so much that the student becomes depending on it”. The next node that was generated was a sub-theme identified as **data review of students’ behaviors**. Both participants from Research Setting 2 indicated that they review data of student’s behaviors. Participant 6 noted, “ Sometimes we do not where the behavior is coming from, sometimes we use the ABC (Antecedent Behavior Consequence) chart to know what happened before when she has an tantrum, what happened next, and we can decide if there’s a pattern of that behavior and then what we can do after.” Participant 7 stated, “ Yes I review data with the director, whenever we do any type of special data collection, either assessment or behavior, we review with the director.”

*Professional development.* All participants expressed the importance of professional development. The first node generated for this theme was **coaching**. Most teachers expressed that they received some form of coaching. Participant 1 stated, “ We have educational coordinators who come in.” Participant 2 expressed, “ I have a meeting with my mentor, and she would tell me all of the things that I could work on and how to just improve.” Participant 3 reported, “ Our director comes every so often, observes and provides strategies on how we can speak to the students, activities that we can do with the child with special needs.” Participant 4 stated, “ We have a coordinator at our school, she comes and observes my teaching, and then I have a coach with my teaching certification program, she comes to observe, she observes and gives me objective feedback.” Participant 5 noted, “ This year we have two coaches that come every week to help us with our students and to help me become a better teacher with lesson planning, with the arrangement of the classroom, how to do observations.” The next node that was generated for this theme was **specific disabilities**. Some participants expressed that they received some training regarding students with different types of disabilities and challenges. For example, Participant 2 stated, “ I received a lot of training on how to deal with social emotional problems and behavioral problems and yet trying to implement those in the classroom.” Participant 3 stated, “We have training on children with ADHD, children who are autistic, once a month professional development, a few times in the year about how to deal with children with behavioral challenges, how parents can help their child at home.” Participant 4 reported, “ We’ve had specific courses on how to manage different type of students, and different types of learners.” Participant 5 stated,

“I’ve received training about children with challenging needs.” The next node for this theme was **role playing**. Participant 1 stated, “What we’ll do is role playing, the trainer will come and pretend to be like a child who is having a rough time with behavior for instance, and then one of us will be the teacher, she will then tell us different kinds of directions we can use to deal with a child who may be having constant tantrums or who self-inflicts or who just has behavior issues.” The next node that was generated for this theme was **transitions**. Participant 6 reported that she received professional development for challenging behaviors, transitioning, “kids having difficulty just coming to school, separation and things like that.” A final theme that emerged from participants’ interview responses was **communication with preschool students with disabilities**. All participants expressed the importance of talking with preschool students with disabilities to gain a better understanding of what the student may be experiencing during challenging times. Participant 1 expressed, “Let’s say a child is hitting her friends a lot, instead of saying we don’t do that sit down, I would sit with the child and ask the child, did she do anything to you, what happened.” Participant 2 stated, “I’ve learned through my graduate classes, that many times behaviors are caused by something very specific, so I try to ask the student how they’re feeling, why are they feeling that way, what’s making them act that way, and then see if that will work to calm them down.” Participant 5 stated, “I usually speak to the child, for example, if the child is crying, or if he/she wants something, I just try to have a conversation with the child about what he/she is feeling.” Participant 7 expressed, “We have a student that has a hard time participating in large group instruction, so what we do is once the student starts fidgeting or interrupting or

being disruptive to the whole group, then there's an option he can work one-on-one with one of the staff, while listening to the conversation, that way he's not missing anything but he can also focus while we're talking while at the same time keeping his hands occupied.”

**Sub-question 2.** Participants’ interviews were conducted to address sub-question 2: What are the current methods, procedures, and activities that are not being used in the research setting to promote the implementation of EBIs with fidelity? A comparison and contrast chart of the following emerging themes, sub-themes and categories are presented in Table 2 from Research Setting 1 and Research Setting 2.

Table 2

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| <u>Comparison/Contrast/of Themes/Subthemes/Categories</u> |                             |
|---|-----------------------------|
| Research Setting 1  | Research Setting 2          |
| Data Review of Students’ Behaviors                        | Teachers Perceived Barriers |
| Teachers Perceived Barriers                               |                             |
| Parent Support/Collaboration                              |                             |
| Professional Development                                  |                             |

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### **Observations**

**Sub-question 1.** Participants’ classroom observations were conducted to address sub-question 1: What are the methods, procedures, and activities being used in the research setting to promote the implementation of EBIs with fidelity? I used an

observation protocol form (see Appendix B) to record field notes of each classroom observation. Table 3 lists a comparison and contrast of the emerging themes, sub-themes, and categories that were generated from participants' collected data and then analyzed from Research Setting 1 and Research Setting 2.

Table 3

| <u>Comparison/Contrast of Themes/Subthemes/Categories</u> |                               |
|---|-------------------------------|
| Research Setting 1  | Research Setting 2            |
| Supports through modeling                                 | Supports through modeling     |
| Categories  | Categories                    |
| Verbal prompts  | Verbal prompts                |
| Visual prompts  | Visual prompts                |
| Physical prompts  | Physical prompts              |
| Theme   | Scaffolding                   |
| Evidence-Based Interventions                              | Evidence-Based Interventions  |
| Categories  | Categories                    |
| Positive reinforcement                                    | Positive reinforcement        |
| Negative reinforcement                                    | Redirection                   |
| Redirection   | Transitions                   |
| Transitions   | Theme                         |
| Theme   | Communication with Preschool  |
| Communication with Preschool                              | Students with Disabilities    |
| Students with Disabilities                                |                               |
| Theme   | Theme                         |
| Support systems   | Support systems               |
| Category  | Category                      |
| Teacher support/collaboration                             | Teacher support/collaboration |

***Supports through modeling.*** The first node generated in NVivo for this theme was **verbal prompts**. During the observations of all teachers engaged in providing verbal prompts, visual prompts and physical prompts to support preschool students with disabilities within the inclusion setting. For example, during small group activities, during large group read aloud and during various play episodes. During a small group

activity Participant 1 verbalized the following” What are you making, are you making a square?” and then stated can you say square?” While observing teacher participant 1 a fire drill occurred. Participant 1 provided physical prompts to a student as the other students and teachers exited the classroom. During a play episode, Participant 1 provided verbal prompts and a visual prompt and modeled how to utilize a plastic rolling pin to flatten some playdough that was on a table. During circle time teacher Participant 2 modeled and provided verbal prompts to a student and expressed, please say“ I want to go to the table toys.” The student imitated what Participant 2 stated. Participant 3 provided verbal prompts and physical prompts to guide a student and then expressed to the student“ Give me your hand, as the student was asked to sit on a small couch and then repeated verbal prompts and physical prompts again for him to go and sit at a table for snack. Participant 4 provided repeated verbal prompts for a student to come and sit in circle during a read aloud of a book entitled “ The Listening Walk.” During the same large group read aloud, Participant 4 observed the student removing a toy object from an adjacent shelf and asked the student to “place the toy back on the shelf” and then asked another teacher to “Have the student sit next to her.” The student was provided verbal and visual prompts to “Change his seat” so that he could sit closer to the other teacher. As students transitioned from a play episode to a large group circle activity for a read aloud, Participant 4 provided repeated verbal prompts for a student to “Place the blocks back on a shelf and go sit in circle”. During snack time, Participant 5 provided verbal and visual prompts to a student and stated, “You got to try your apple.” Participant 6 modeled and then guided various students how to place their pictures in the attendance column section

on a board. Participant 6 instructed a student to walk in the classroom and then proceeded to use her fingers to show the student how she should walk within the classroom environment (visual and verbal prompts). The next node generated was a sub-theme identified as **scaffolding**. Participant 7 conducted a large group circle teacher-directed math concept instruction of base 10. On a board was two separate squares with six dots in one square and four dots within the other square. Students were prompted to count each dot within each square and then verbally expressed how many dots were counted (computation of single digits). Participant 7 provided scaffolding by pointing to each dot (one-to-one number correspondence). Upon the completion of this large group instruction, students engaged in small group math activities at designated tables. During this observation, Participant 7 supported and scaffold two students who were engaged in a base 10 math concept activity while seated on the floor. Participant 7 asked both students the following questions and then supported them to respond, “ How many dots do you have on your board?” “Do you have more dots than your peer?? How many more dots do you need to equal to the numeral 10?” During another large group teacher-directed activity, Participant 7 also conducted a read aloud, throughout the read aloud Participant 7 discussed the various characters in the story, the setting, and then supported students when she asked them “ What do you think will happen next?” (Make predictions with visual and verbal prompts).

***Support systems.*** The first node generated in NVivo for this theme is **teacher support/collaboration**. Based upon the classroom observations, all teachers supported and collaborated with one another as they transition students from one activity to the



next, observed a teacher in a different classroom conduct a large group circle meeting, as another teacher provided support to a preschool student with disabilities. Observed Participant 7 with two other teachers from a classroom conduct small group activities with 3 to 4 students. During a fire drill, observed Participant 1 and two other teachers lined up students within the classroom and directed them to exit the classroom.

*Evidence-based interventions.* The first node generated in NVivo for this theme was **positive reinforcement**. After students were instructed to clean up ( transition to another activity), Participant 1 stated “ How do we clean up.” You did a good job, as the student placed the toy dinosaur inside a clear plastic bin, and then Participant 1 expressed “Thank you” to the student. Participant 3 was observed providing repeated instruction to a student to sit in a chair during snack and “put your feet down, thank you and eat your snack, the food is to eat and not to play thank you.” As students were transitioning from a large group morning meeting to center time, Participant 4 provided verbal praise to a student and stated, “ Where would you like to go, you are sitting so nicely.” During another interaction, teacher Participant 4 provided verbal praise to a student and stated “ Good job” when the student placed several wooden toy tracks together. The next node generated within NVivo for this theme was **negative reinforcement**. Participant 5 observed a student pushing other students during a read aloud at circle time, and then stated to the student “ I see what you are doing, get up and go sit at the table.” The student did not return to the group circle for the read aloud. The next node that was generated within NVivo for this theme was **redirection**. Several teachers were observed redirecting students. Participant 3 was observed redirecting a student who was running

around the classroom, and then stated aloud “ Go sit at the table and use walking feet, the student was then redirected and then guided (physical prompts) by the teacher to go and sit at the table for snack. Participant 4 redirected a student to change his seat, because the student was observed removing a toy from an adjacent shelf during a large group read aloud at circle time. The student was redirected to sit near another teacher during this activity. The last theme generated for this theme was **transitions**. During an observation of Participant 3, upon entering the classroom, students were transitioning from naptime to snack time, a student was told to put on his sneaker, he required support from Participant 3. Upon being instructed to go sit at a table for snack, the student proceeded to walk around the classroom, the student was guided by Participant 3 to sit on a child size couch. During the observation of Participant 4, upon entering the classroom students were transitioning from various play centers to a large group circle activity for a read aloud. During a classroom observation, Participant 6 expressed to all students that they had 5 more minutes of play. Participant 6 had a timer in her hand and then proceeded to walk through out the classroom and display the clock and sang various transition songs (students were transitioning from free play to a large group circle morning meeting). During the observation of Participant 7, the participant used a timer to indicate when students had to transition from small group math activities to a large group read aloud.

A theme that emerged from the classroom observations of all participants was **communication with preschool students with disabilities**. I observed teacher participants supporting and communicating with a designated preschool student with a disability, for example, expanded upon their language when preschool students with

disabilities were engaged in various activities within the inclusion setting. Participant 1 communicated the following to a student who wanted to go to different play center, “ You have to clean up the playdough, some playdough is on the floor before you can go and play with the toy dinosaurs.” Participant 2 also supported a student to express himself when during a play episode he wanted to go to a different play center. During snack time teacher Participant 3 expressed the following to a student “Go sit at a table for snack” and that the student could give napkins to each child seated at a table for snack time. During snack time Participant 3 also asked the student the following “ What is this that you’re eating?” The student responded, “ It is a pretzel”, teacher Participant 3 responded “ It looks like a pretzel, but it’s rice cakes”. Participant 4 engaged a student in the following dialogue during a play episode “ Where is the train going? “What sound does a train make?” Participant 5 communicated the following to a student (during a small group table activity) “If you need more space at the table you can go and sit on the other side of the table, there is more space there.” During the classroom observation of Participant 6, a student screamed and fell on the floor. Participant 6 in an attempt to console the student, held the child and then picked the child up and placed the child on her lap. The student was upset because she wanted a doll that another student was playing with. Participant 6 redirected the student to select another desired toy object from a different play center. During the same observation, Participant 6 subsequently read a story entitled “ Lots of Feelings” that focused on various emotions (classroom theme for the month) and then subsequently displayed pictures of various emotions and engaged students to identify each emotion.

**Sub-question 2.** Participants' interviews and classroom observations from Research Setting 1 and Research Setting 2 were collected, analyzed and triangulated to answer sub-question 2: What are the current methods, procedures, and activities that are not being used in the research setting to promote the implementation of EBIs with fidelity.

### **Triangulation**

I triangulated data from participants' interviews and classroom observations to gain a deeper understanding of the methods, procedures, and activities that were used or not used to promote and improve the implementation of EBIs with fidelity. I also determined if what participants stated in their interviews were observed during their classroom observations. I compared and contrasted the interview data that shed light on the methods, procedures, and activities used in the research setting, such as observing teachers' actual practice of applying EBIs in the classroom, as compared to their perceived implementation. I used the observational data to add to the results and to corroborate or contradict what I learned from the interviews so that I may provide comprehensive research-based recommendations to close the gaps in practice.

### **Gaps in Practice**

There were several gaps in practice that were identified within Research Setting 1. Based on data obtained from participants' interviews from Research Setting 1, participants' indicated that they only collaborated with parents when their child becomes uncontrollable within the classroom setting, or if their child physically harmed another child. Teachers reported that they do not confer with parents to promote evidence-based

interventions that could be used within the classroom setting and in the home environment as well. Participants in Research Setting 1 revealed that they do not review data of students' behaviors which could be used to determine what evidence-based intervention (s) could be implemented. Another participant from Research Setting 1 reported that although she received professional development training on working with children with special needs, it's was very broad; it's not like kids on the spectrum or kids with ADHD." The conceptual framework of *implementation science* "is associated with research that investigates the best ways to ensure that evidence-based information is integrated into practice" (Olswang & Prelock, 2015, p. 2). Brock and Carter (2017) emphasized that proficient training is required that permits preservice, and in-service teachers, to more effectively implement evidence-based interventions to enhance outcomes for students with disabilities.

Additionally, based upon the data analyzed (interviews and classroom observations), there were many commonalities and several differences among the educational and classroom practices of general education teachers within Research Setting 1 and Research Setting 2. I generated many of the same emerging themes, sub-themes, and categories for both research settings. Some of the participants' interview responses from Research Setting 1 and Research Setting 2 corroborated with what I observed during their classroom observations. For example, general education teachers from both research settings were observed modeling language and prosocial behaviors for preschool students with disabilities within the inclusion setting. Some general education teachers in both research settings reported in their separate interviews the use of positive

reinforcement strategies to motivate preschool students with disabilities to engaged in prosocial behaviors. Another commonality among participants in both research settings was the extent to which general education teachers supported one another within the classroom environment (e.g., during students' transitions, interactions with students with disabilities during small group, and large group instruction/activities). There were several differences among the general education teacher participants results in both research settings, for example, the extent to which they collaborated with parents to promote the use of evidence-based strategies within the classroom and at home, professional development, and the data review of students' behaviors to inform instruction.

### **Evidence of Trustworthiness**

#### **Credibility**

Credibility is the researchers "ability to take into account all of the complexities that present themselves in a study and to deal with patterns that are not easily explained" (Ravitch & Carl, 2016 p 188). Qualitative researchers attempt to establish credibility by implementing the validity strategies of triangulation, member checking, presenting thick descriptions, discussing negative cases, "having prolong engagement in the field using peer debriefers, and having an external auditor" (Ravitch & Carl, 2016, p. 188). Data from the interviews and observations were triangulated to gain a deeper understanding of the methods, procedures and activities that needed to be integrated into the research setting. I also determined if what participants stated in their interviews corroborated with what was observed within their classrooms. I used QSR NVivo software program to organize emerging themes, sub-themes and categories from data collected and analyzed.

QSR NVivo software helps researchers to transcribe, organize, store, and retrieve data utilized in their research studies (QSR International Pty Ltd, n.d.).

I used the QSR NVivo software to transcribe the audio-recordings from the interviews. I looked for themes, sub-themes and categories that were aligned with the interview questions and observations, and that were guided by the research questions. According to Ravitch and Carl (2016), the researcher should code their “data to develop themes and then refine and revise these themes” (p. 262). It is important to scrutinize themes by checking and rechecking your interpretations against the data as well as looking for alternative explanations and possible misinterpretations (Ravitch & Carl, 2016). I sent each participant an electronic copy of my draft findings and themes for review of my interpretation of their data. Participants were instructed to review their draft and themes for accuracies and notify me if any changes were needed. All 7 participants did not respond to the email.

### **Transferability**

Transferability is how qualitative studies can be applicability, or transferable to a broader context while still maintaining context-specific richness” (Ravitch & Carl, 2016, p.188). Methods for achieving transferability includes having detailed descriptions of the data as well as each context in this case so that readers and researchers can make comparisons to other contexts based on as much information as possible (Ravitch & Carl, 2016). I established transferability by addressing the context of the study (e.g., the participants, data collected, data analyzed, and the settings). I provided rich thick descriptions of the data that was generated from participants’ interview responses and

classroom observations, (e.g., what evidence-based interventions were used or not used within the inclusion settings for preschool students with disabilities); this information may also enable readers of my study to make their own “judgments about what does and does not apply to their particular scenarios”(Burkholder et al., 2016, p. 123).

### **Dependability**

Qualitative research studies are considered dependable by being consistent and stable over time (Ravitch & Carl, 2016). Dependability is a similar construct to reliability in quantitative methods (Ravitch & Carl, 2016). The researcher’s data should answer the research questions. Methods for achieving dependability are member checking, the triangulation, and sequencing of methods and creating a well-articulated rationale for these choices to confirm that the researcher has created the appropriate data collection plan given the research questions (Ravitch & Carl, 2016, p. 188). The interviews and classroom observations were used to triangulate the data collected and analyzed and to substantiate the findings.

### **Confirmability**

Confirmability requires that other informed researchers arrive at essentially the same conclusion when examining the same qualitative data (Burkholder et al., 2016). The goal of confirmability is fully “to acknowledge and explore the ways biases and prejudices map onto interpretations of data and to mediate those to the fullest extent possible through structured reflexivity processes” (Ravitch & Carl, 2016, p. 188). Methods to achieve confirmability include implementing triangulation strategies, researcher reflexivity and external audits (Ravitch & Carl, 2016, p. 188). Reflexivity



requires the researcher to document in field notes, memos, or journals, their self-critical analysis of biases, their role in and responses to the research process, and any adjustments made to the study based upon ongoing analysis (Burkholder et al., 2016). Reflexivity in qualitative research required me to maintain an openness in critically examining my subjectivity that may influence my research. I kept a reflexivity journal writing memos, noting potential biases and assumptions (Koch, Niesz, & McCarthy, 2014). I used NVivo software program to organize and group all data that was collected and then analyzed. I also used a peer reviewer. According to Merriam and Tisdell (2016), a peer reviewer can be either a “colleague familiar with the research or one new to the topic” (p. 249). Additionally, the role of the peer reviewer is to pose questions that assist the researcher in clarifying conclusions and excising researcher bias (Burkholder, Cox & Crawford, 2016, p. 76). The peer reviewer for this study was someone who completed a qualitative dissertation and obtained a Doctor of Education in 2018. These measures helped with the confirmability of my study.

### **Summary**

In this chapter I addressed my research questions, the analysis of the interviews and observations and the results of the data collected, the themes, sub-themes and categories generated from participant’s interviews responses and classroom observations. The following research questions for this study was: RQ1: What methods, procedures, and activities need to be integrated in the research setting to promote the implementation of EBIs with fidelity for preschool student with disabilities. Sub-question 1: What are the current methods, procedures, and activities being used in the research setting to promote

the implementation of EBIs with fidelity? Sub-question 2: What are the current methods, procedures, and activities that are not being used in the research setting to promote the implementation of EBIs with fidelity? I conducted semi-structured interviews and classroom observations of each participant. I collected and analyzed participants' interviews and observations and then used the NVivo software program to generate themes, sub-themes and categories. I used member checks to confirm the validity and accuracy of the themes that I identified. Creswell (2014), described member checking as an important component of qualitative research methods by "taking the final report or specific descriptions or themes back to the participants and determining whether these participants feel that they are accurate (p. 25)." Once the data was collected and then analyzed, I emailed each participant a copy of my draft findings and themes for review of my interpretation of their data. Participants were instructed to review their draft for accuracies and notify me if any changes were needed.

I used comparison/contrast tables to show the themes, sub-themes and categories that emerged from the data collected and analyzed from participants' interview responses and classroom observations (see Table 2, and Table 3). The results of the data indicated some commonalities and differences among participants as it pertained to what methods, procedures and activities were being used or not being used to promote evidence-based interventions with fidelity within the inclusion settings and corroborated what participants indicated in their interview responses and classroom observations. For example, participants from Research Setting 1 reported from their interview responses that they only contacted parents when their child's behavior became uncontrollable

within the classroom setting or if their child harmed a child. Participants from Research Setting 2 noted that they included their students' parents in using evidence-based "strategies" that can work at home and or school. Another contrast was that participants in Research Setting 1 noted that they do not review data of students' behaviors however participants from Research Setting 2 noted that they do review data of students' behaviors.

In Chapter 5, I discuss the key findings from the study and its implications for social change. The chapter includes recommendations for future research and practice as well. Additionally, I discuss the limitations of the research study. The chapter ends with a conclusion to the study.

## Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this exploratory, qualitative case study was to interview and observe general education teachers regarding the methods, procedures, and activities they used to promote and improve the implementation of EBIs with fidelity for preschool students with disabilities within inclusion settings. I wanted to obtain a more comprehensive understanding of what gaps in practice needed to be addressed in the research settings to promote and improve the implementation of EBIs. The research questions were addressed from data collected from participants.

Some of the participants' interview responses corroborated what I observed during their classroom observations. For example, I observed general education teachers in both research settings modeling language and prosocial behaviors for preschool students with disabilities within the inclusion setting. Some general education teacher participants in Research Setting 1 and in Research Setting 2 also reported in their interviews that they use positive reinforcement to motivate preschool students with disabilities to engage in prosocial behaviors. Another commonality among general education teachers in both research settings was the extent to which general education teachers collaborated with and supported one another within the classroom environment (e.g., during students' transitions, and interactions with students with disabilities during small group and large group instruction/activities). Differences among the teacher participants in both research settings were the extent to which they collaborated with parents to promote the use of evidence-based strategies within the classroom and at home, professional development, and the data review of students' behaviors to inform

instruction. The results of the data analysis revealed some commonalities and differences among participants pertaining to what methods, procedures, and activities, if any, they used to promote EBIs with fidelity within the inclusion settings. Many of the same emerging themes, subthemes, and categories were created for both research settings.

### **Interpretation of the Findings**

#### **Research Question 1**

I conducted semi structured interviews with participants to address RQ 1: What methods, procedures, and activities need to be integrated in the research setting to promote the implementation of EBIs with fidelity for preschool students with disabilities? Based on the data collected and analyzed from participants' interviews and classroom observations, the following themes, subthemes, and categories emerged: parent support/collaboration, data review of students' behaviors, professional development, and teachers' perceived barriers. General education teachers from Research Setting 1 indicated that they only involved a parent when their child's behavior became uncontrollable within the classroom and/or if their child harmed another child. Although this topic was not discussed within the literature review, the importance of parent involvement has been documented in research as a contributing factor to a child's success. Parent-teachers partnerships have shown to be an effective method of involving parents in the education of their children, and the benefits are well documented (Laster, 2016). A subtheme that emerged from the interviews was data review of students' behaviors. Many general education teachers from Research Setting 1 expressed that they do not review data of students' behaviors. However general education teachers from

Research Setting 2 reported that they do review data. One of the teachers in Research Setting 2 indicated that an ABC chart was used for a student to determine if there was a pattern of a specific behavior (s). The other general education teacher from Research Setting 2 reported that she reviews data with the director. This finding is consistent with researchers emphasizing “the importance of using data for making instructional improvements; this can lead to improvements in educational processes and increased student achievement” (Prenger & Schildkamp, 2018, p. 735).

The conceptual framework of implementation science “is associated with research that investigates the best ways to ensure that evidence-based information is integrated into practice” (Olswang & Prelock, 2015, p. 2). A theme generated from general education teachers’ semi structured interviews was professional development. One of the general education teachers from Research Setting 1 noted that although she received training about working with children with special needs, “the training was very broad and it was not like kids on the spectrum, or kids with ADHD.” In Chapter 2 of the literature review, Brock and Carter (2017) emphasized that proficient training is required that permits preservice and in-service teachers to effectively implement EBIs to enhance outcomes for students with disabilities. The implementation science framework is “concerned with an understanding of the processes, procedures and conditions that promote or impede the transfer, adoption, and use of evidence-based interventions in the context of typical everyday settings” (Kelly & Perkins, 2012, p. 24). The implementation science framework focuses on the importance of considering implementation practices and interventions practices used by the intended adopter of the implementation, as well as

those supporting the intended adopter (Dunst et al., 2013). I provided research-based recommendations to possibly close the gaps in practice identified in the literature review to improve the implementation fidelity of EBIs in the research settings. Professional development, parent support/collaboration, and the data review of students' behaviors are essential provisions for closing the research to practice gap and in promoting and improving the implementation of evidence-based interventions by general education teachers in an inclusion setting for preschool students with disabilities.

Another subtheme emerged from participants' interviews was teachers' perceived barriers. One of the general education teachers in Research Setting 1 indicated that a primary barrier that she faced was a lack of staff or time to support children with special needs in the inclusion setting. Similarly, the other general education teacher reported that a key struggle with dealing with behavioral problems is having to take care of and ensure that other children are having an engaging experience at school. Although a general education teacher from Research Setting 2 indicated that she includes her students' parents in using evidence-based "strategies" that can work at home and school, she also reported that a perceived barrier is that some parents might not concur with some of the strategies that she may have implemented within the classroom for their child.

### **Sub-question 1**

I used semi structured interviews and classroom observations to address Sub-question 1: What are the current methods, procedures, and activities being used in the research setting to promote the implementation of EBIs with fidelity?

I used the observational data to corroborate what was learned from the interviews and to provide more comprehensive results that can be used for providing research-based recommendations to close the gaps in practice. Based on the data analyzed from the semi-structured interviews and classroom observations, similar emerging themes, sub-themes and categories were generated for both research settings (e.g., *professional development, supports through modeling, evidence-based interventions, communication for preschool students with disabilities, and support systems*).

***Professional development.*** Most teacher participants from both research settings reported that they received various types of professional development training (e.g., training regarding students with different types of disabilities and challenges, how to communicate with students with disabilities, and how parents can support their child at home).

***Supports through modeling.*** Based on the interviews and the observations of general education teachers within both research settings, general education teachers used verbal prompts, visual prompts and physical prompts to guide, and to reinforce specific behaviors within the inclusion setting. During the classroom observations, all teachers engaged in providing verbal prompts, visual prompts and physical prompts to support preschool students with disabilities within the inclusion setting, for example during small group activities, and during large group read aloud and during various play episodes. The research confirmed that for young students with disabilities, “most interventions should be used during play and other routine activities, be embedded and distributed across activities and occur when they are contextually relevant” (Horn, Lieber, Li, Sandall, &



Schwartz, 2000, p. 209). The review of social skills intervention literature revealed that the following features of interventions were frequently used with preschool children with disabilities “prompting of target behaviors, rehearsal of target behaviors, play-related activities, free-play generalization, reinforcement of appropriate behaviors, modeling of specific social skills, storytelling, direct instruction of social skills, and imitation of appropriate behaviors” (Vaughn, 2003, p. 3).

***Evidence-based interventions.*** All general education teachers within both research settings reported using some type of evidence-based intervention for a preschool student with a disability within the inclusion classroom. Based on the semi-structured interviews, teachers reported that modeling was used to encourage students to follow classroom rules, express their feelings in a prosocial manner, and use appropriate language when requesting from another peer to share a desired toy object during a play episode instead of grabbing “the toy”. During my classroom observations of some general education teachers, I observed teachers modeling appropriate and simple language (e.g., a peer who requested to play in a specific center). General education teachers also used positive reinforcement to increase desired behaviors. I observed several general education teachers in both research settings use positive reinforcement when students followed simple directions provided to them by the teacher in the form of a specific verbal praise. A general education teacher from Research Setting 1 reported in an interview that she uses reward stickers (tangible reward) when students demonstrated prosocial behaviors. Researchers confirmed that positive reinforcement occurs “when a response follows immediately by the presentation of a stimuli, and as a result, similar

responses occur more frequently to increase desired behaviors involve consistently rewarding the target child for appropriate behaviors” (Alberto & Troutman, 2017, p. 186; Cooper et al., 2007; Prince, 2013; Vaughn et al., 2003; Withey, 2017). “A reward serves to motivate the child to demonstrate the target behavior frequently (e.g., social reinforcements such as verbal praise, or hugs, are among the most commonly used reinforcers) (Vaughn et al., p. 4; Ross, 2015).

***Communication for preschool students with disabilities.*** All general education teachers within both research settings demonstrated and expressed the importance of talking with preschool students with disabilities to gain a better understanding of what the student may be experiencing during challenging times. During my observations of general education teachers in Research Setting 1 and Research Setting 2, I observed general education teachers for example, communicate simple directions to a preschool student with disabilities to transition from one activity to the next, observe teachers explain some classroom rules to preschool students with disabilities, observe teachers provide verbal prompts and visual prompts to support students with disabilities to engage in small group activities.

***Support systems: Teacher support/collaboration.*** General education teachers in both research settings indicated that they support one another within the inclusion classroom and in supporting preschool students with disabilities. My classroom observations of the general education teachers confirmed this. Teachers supported each other and students with disabilities. For example, when students transitioned from one activity to the next, collaborated during teacher-directed small group and large group

instruction and activities, worked and shared the responsibilities for written observations of designated students with disabilities within the inclusion setting.

***Parent support/collaboration.*** According to general education teachers semi-structured interviews there were several differences to the extent in which parents collaborated and supported general education teachers in both research settings. General education teachers in Research Setting 1 reported that they basically involved parents when their child has poor behavior, to the extent in which their child harmed another peer, or their child disrupted the classroom entirely. However general education teachers in Research Setting 2 reported that they conversed with parents on a daily basis and included parents with implementing strategies that their child was taught (a specific behavioral strategy) within the classroom and to use these strategies at home.

***Administrative support.*** According to teachers' semi-structured interviews, for the most part, administrative support for general education teachers within both research settings are consistent.

## **Sub-question 2**

Participants' interviews and classroom observations from Research Setting 1 and Research Setting 2 were collected, analyzed and triangulated to answer sub-question 2: What are current methods, procedures, and activities that are not being used in the research setting to promote the implementation of EBIs with fidelity?

I triangulated data from the participants' interviews and classroom observations to gain a deeper understanding of the methods, procedures, and activities that were used or not used to promote and improve the implementation of EBIs with fidelity. I also

determined if what participants stated in their interviews were observed during their classroom observations. Many of the same emerging themes, sub-themes and categories were generated for both research settings (e.g., *supports through modeling, evidence-based interventions, communication for preschool students with disabilities, and support systems*). Based on participants' semi-structured interviews, the key differences among both research settings were the following emerging themes, sub-themes and categories, *parent support/collaboration, data review of students' behaviors, teachers' perceived barriers, and professional development*.

I identified several gaps in practice in Research Setting 1. Based on the data obtained from general education teachers semi-structured interviews, teachers primarily communicate with parents when their child becomes uncontrollable within the classroom setting, or if their child physically harmed another child. General education teachers indicated that they do not confer with parents to promote evidence-based interventions that could be used within the classroom setting and in the child's home environment. Participants in Research Setting 1 reported that they do not review data of students' behaviors which could be used to determine what evidence-based intervention (s) could be implemented. A teacher participant from Research Setting 1 also expressed that although she received professional development training on working with children with special needs, "it was very broad"; it's not like kids on the spectrum or kids with ADHD." Trivette and Dunst (2011) posited that Professional Development is needed to support general education teachers to apply evidence-based interventions with fidelity for preschool students with disabilities effectively. The conceptual framework of

*implementation science* “is associated with research that investigates the best ways to ensure that evidence-based information is integrated into practice” (Olswang & Prelock, 2015, p. 2).

### **Limitations of the Study**

One of the primary limitations of my study was that the sample size was small and only included 7 participants. I addressed this limitation by interviewing and observing general education teachers from two different schools. Another limitation was the varying degrees of teaching experiences, which may have impacted on participants’ responses to the interview questions. Teachers with more experience may provide extensive information regarding implementing evidence-based interventions with fidelity as opposed to a novice teacher. Another limitation was that participants’ classroom observations were only 1 hour in duration.

### **Recommendations**

I used the results of this study to inform the gaps in practice that were related to the methods, procedures, and activities that should be used in a preschool inclusion setting to improve the fidelity of EBIs. I recommend professional development training, parent support/collaboration, and the data review of students’ behaviors are used consistently by general education teachers to promote and improve the implementation of evidence-based interventions with fidelity for preschool students with disabilities in an inclusion setting. Brock and Carter (2017) emphasized that proficient training is required that permits preservice, and in-service teachers, to more effectively implement evidence-based interventions to enhance outcomes for students with disabilities. Parent-teachers

partnerships have shown to be an effective method of involving parents in the education of their children, and the benefits are well documented (Laster, 2016). General education teachers should review the data of all students, including preschool students with disabilities, to guide them and inform instruction. Researchers also emphasize the importance of using data for making instructional improvements; “this can lead to improvements in educational processes and increased student achievement” (Prenger & Schildkamp, 2018, p. 735). Both research settings do not use a specific social skills/behavioral program. Future research could be conducted by general education teachers to monitor and then determine if a social/skills behavioral program helped them to effectively implement evidence-based interventions with fidelity for preschool students with disabilities. Future research could also focus on what types of professional development (e.g., coaching, performance feedback, and/or direct training) used supported general education teachers to effectively implement evidence-based interventions with fidelity for preschool students with disabilities within inclusion settings.

According to Collier-Meek, Sanetti and Boyle (2016), a coach offers training and support to ensure that the intervention is delivered with significant levels of implementation fidelity. Performance feedback involves “observing the practitioner, collecting data related performance, and then sharing the data with the practitioner to improve future implementation” (Brock & Beaman-Diglia, 2018, p. 33; Darling-Hammond, Hylar & Gardner, 2017). The effectiveness of performance feedback has been evaluated across individual and small groups, and class-wide interventions to support

learners with and without disabilities and with implementers such as general education teachers and special education teachers (Fallon et al., 2015). Direct training, also referred as *behavioral skills training*, “is provided before the intervention is delivered to support teachers in developing and practicing the skills needed to implement the interventions” (Fallon et al., 2018, p. 197).

### **Implications**

Teachers may benefit from the results of this study by gaining more understanding of the issues that are associated with implementing EBIs with fidelity. Professional development is needed to support general education teachers to effectively apply evidence-based interventions for preschool students with disabilities (Trivette & Dunst, 2011). Teachers need clear parameters about what an intervention is, what it looks like, and how to use it (King-Sears et al., 2018). To provide instruction or interventions with fidelity, general education teachers may require ongoing professional development support in the form of coaching, performance feedback and direct training. Preschool students with disabilities may benefit from general education teachers that implement EBIs in the inclusion classroom. The “use of performance feedback, as part of a Professional Development approach for practice change, has been validated in several preschool intervention studies with promising results” (Hemmeter et al., 2015, p. 145; Snyder et al., 2012). This study may affect positive social change on a local level by supporting general education teachers to maximize preschool student with disabilities social-emotional and academic outcomes through EBIs. School leaders should consider

incorporating a social skills program that will help practitioners to implement evidence-based interventions with fidelity for preschool students with disabilities.

I used the results of this study to inform the gaps in practice that were related to the methods, procedures, and activities that promote the fidelity of EBIs in a preschool inclusion setting. I recommend professional development training, parent support/collaboration, and the data review of students' behaviors are used consistently by general education teachers to promote and improve the implementation of evidence-based interventions with fidelity for preschool students with disabilities in inclusion settings.

### **Conclusion**

The results from this study helped me to identify some of the critical areas of implementation science that were missing in schools for preschool students with disabilities. I provided research-based recommendations to potentially close the gaps in practice identified in the literature review to improve the implementation fidelity of EBIs in the research settings. Professional development, parent support/collaboration, and the data review of students' behaviors are essential provisions for closing the research to practice gap and in promoting and improving the implementation of evidence-based interventions by general education teachers in an inclusion setting for preschool students with disabilities.



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## Appendix A: Interview Protocol

Date of Interview \_\_\_\_\_ Started: \_\_\_\_\_

Ended: \_\_\_\_\_

Interviewed by: \_\_\_\_\_

**Demographic Information**

- Are you a preschool teacher?
- How many years have you taught?

The Research Questions:

Research Study: Teachers' Experiences Implementing Evidence-Based Interventions with Fidelity for Preschool Students with Disabilities.

RQ 1: What methods, procedures, and activities need to be integrated in the research setting to promote the implementation of EBIs with fidelity for preschool students with disabilities?

Sub question 1: What are the current methods, procedures, and activities being used in the research setting to promote the implementation of EBIs with fidelity?

Sub questions 2: What are the current methods, procedures, and activities that are not being used in the research setting to promote the implementation of EBIs with fidelity?

**The Interview Questions:****Methods and Procedures:**

1. Describe how you provide evidence-based interventions in the classroom to address behaviors?

**Probe:** You mentioned you do; can you elaborate on that?



**Probe:** Can you describe the last time you taught something using evidence-based interventions?

2. Describe how you address the behavior problems that your students demonstrate at the school?
3. How do you determine what interventions you use to improve the behavior of your students?
4. Describe how you know if the interventions you are using are working?
5. Describe the specific procedures you follow if one or more of your students demonstrate poor behavior?

### **Activities**

6. What training has been provided to you to improve the behavior of your students?  
Have you ever received training before working at your current school?
7. Describe the support you receive regarding the behavior of your students?
8. Do you involve parents in order to improve your students' behavior? If so, how are parents involved?
9. Do you participate in a data team or collaboration teams to review your students' behaviors, learn from each other about interventions and review data?
10. Describe the progress that your preschool students with a disability has made since the implementation of an evidence-based intervention? If not, why?
11. What barriers do you perceive to implementing EBI's with fidelity for preschool student with disabilities?

**Probe:** Are you using a specific program? What training have you received to implement an evidence-based intervention?

**Probe:** Are you following the specific steps of the intervention? If not, Why? In your opinion, what do you think could be done differently?

**Probe:** What training has been provided to you to improve the behavior of your students?

## Appendix B: Observation Protocol Checklist

Observational Field Notes:

Setting:

Role of the Observer: Nonparticipant

Time:

Length of Observation: 60 minutes

The Research Questions:

Research Study: Teachers' Experiences Implementing Evidence-Based Interventions with Fidelity for Preschool Students with Disabilities.

RQ 1: What methods, procedures, and activities need to be integrated in the research setting to promote the implementation of EBIs with fidelity for preschool students with disabilities?

Sub question 1: What are the current methods, procedures, and activities being used in the research setting to promote the implementation of EBIs with fidelity?

Sub question 2: What are the current methods, procedures, and activities that are not being used in the research setting to promote the implementation of EBIs with fidelity?

| <b>Descriptive Comments</b>   | <b>Descriptive Comments</b>                             | <b>Observational Field Notes<br/>/Reflective Notes</b> |
|---|---|--|
| <b>Fidelity to Structure-<br/>Methods, procedures or<br/>activities</b> | <b>Missed<br/>Opportunities<br/>related to methods,</b> |  |

|  |                                       |  |
|--|---------------------------------------|--|
| <b>Fidelity to Process-<br/>Methods, procedures,<br/>or activities</b> | <b>procedures and<br/>activities.</b> |  |
|--|---------------------------------------|--|